Public Lecture
ON THE
STUDY OF PHYSIOLOGY,
ITS RELATION TO OTHER STUDIES, AND ITS USE AS A PREPARATION FOR THAT OF MEDICINE.

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GENTLEMEN,—The custom of beginning a course of academical instruction by an introductory lecture addressed to a general audience is, in the opinion of many judicious persons, one which, on ordinary occasions, may be advantageously dispensed with. The circumstances under which I now address you seem to be exceptional. I have come to Oxford as a stranger, not to teach a new subject, but to fill a new place. As everyone here present probably knows, the accomplished biologist who, up to the time of his lamented death, held the office of Linacre Professor of Physiology here, included in the wide scope of his teaching the whole subject of biology, bringing to the task an amount and variety of special knowledge, and a wealth of illustration derived from his familiarity with other subjects, which were the admiration of all who came into relation with him, either as a teacher or as a man of science.

It is not my business to-day to explain to you why it has been judged expedient to establish in Oxford a separate professorship of physiology. It will be sufficient if I state to you that in making the separation this university has followed the example of other great schools of biology, and that the severance of the two branches of the subject is demanded, not only on account of their divergence from each other in respect of method and matter, but still more on account of the enormous extent of both subjects. I shall endeavour to-day first to tell you what is the meaning of physiology, and what is its relation to the studies which you have undertaken here in preparation for it, and then of its uses and practical application. With reference to this last, I must ask permission of my audience to address what I have to say specially to those who are looking forward to entering on the profession of medicine.

Physiology belongs to a group of studies which have this in common, that they consist in the observation of the changes which go on in the universe, and in the determination of the order of these changes—in other words, in the investigation of the order of nature. In so far as these studies relate to the surface of our planet, they are for the most part biological; for here the chief element of change is plant and animal life. Some of them have to do with man exclusively, particularly those interesting inquiries which have in later times been brought together under the comprehensive word "anthropology," and which serve as a link between biology and archæology; but we usually restrict the term "biological" to those which regard man not as man, but as an animal—i.e., in respect of all those endowments which he has in common with what he is pleased to call the inferior creatures. These studies are naturally divided, as well in respect of method as of subject, into two—namely, morphology and physiology. The former, taking its departure from the very elementary observation that all living things grow, and that in this respect (that of growth) man stands on the same ground as plants and animals, inquires how animals and plants have become what they are. It as naturally divides itself into two branches—namely, the determination of the becoming of the individual, embryology, the question how the individual organism, whether plant, animal, or man, has unfolded itself from a germ of extreme simplicity, and phylogeny, the question how the tribe of plants or animals has undergone a corresponding evolution in the long process of time.

Physiology accepts and uses all that the morphologist has ascertained as to the form of organisms and as to the way in which they have been built up, but takes as a further point of departure a fact almost as familiar as that of growth itself; that in addition to growth there are other and most manifold changes continually going on in the living body, with the outward manifestations of which everyone is conversant; changes which are as unceasing as those of the ocean or of the atmosphere, but unlike them in this respect, that they are orderly, and, if not constant, rhythmical. It is the sum or complex of these changes, whether visible or invisible, external or internal, which constitute what the physiologist means when he uses the word life; but he does not for a moment forget that just as the biography of each individual forms part, however insignificant a part it may be, of the history of the nation, so the chemical and physical processes which are at this moment going on in every part of the living body of every human being, animal, or plant, is a part of the same order which expresses itself in the morphological development of the whole. As terms for this order, the morphologist and physiologist alike uses such words as adaptedness, or the more widely significant German word *Zweckmässigkeit*, both of which are the expressions of a conviction which seems naturally to arise in the observer's mind, he knows not how, in the contemplation of the processes of life. Since Darwin, whatever obscurity of meaning formerly beset such words as I have mentioned has disappeared, and it has been found that the method of regarding nature, which it was his life-work to exemplify in its application to the external forms and relations of plants and animals, is as useful in physiological studies as in those of the morphologist. In stating that the internal motions or processes of animal and plant life may be regarded as answers or reactions of the organism to antecedent or concomitant external conditions, we are indeed only giving fuller expression to a thought which at all times has been present to the mind of the physiologist as the immediate and spontaneous outcome of the effort to understand what he observes. This fundamental notion is the starting-point for the two great divisions of physiological work. These are (1) the determination of the manifold and ever-changing actual relations between the organism and all that is outside of it; and (2) the investigation of the nature of the nexus between influence and reaction. In this last, notwithstanding the enormous amount of work which has been done towards it during the past thirty years, we are as yet only beginners, for the end in view is nothing less than the acquirement of so complete an understanding of the workings of the living organism that the external conditions being known under which an organism is placed it is possible to forecast its reaction. It is because this goal is so far distant, and perhaps unattainable, that physiologists usually regard their subject rather as an application of scientific methods to a well-defined field of investigation than as a science of itself. Our business is both to set ourselves problems and to solve them. In the setting of them we have help from the morphologist, for it is the structure of organs which suggests the question of their function or purpose; but for the means of solving them we have recourse to the chemist and physicist, using the means we borrow from them, just as they give them to us.

I shall, I think, best illustrate what I have said by bringing you to the frontier lines at which physiology borders with other regions of thought and work, and for this purpose must inquire a little more minutely than we have done as yet into the nature of some of the questions with which the physiologist concerns himself.

Let us assume it to be understood that physiology is the knowledge of the processes which normally have their seat in the living substance, structure, or framework of the living plant, animal, or man. These we find to be of two kinds—namely, those which present themselves in non-living matter when under the same conditions, and those which go on under conditions peculiar to the organism, and which we know only by their physical effects—namely, by the physical changes which accompany them. The phenomena of the former class we naturally divide for the purposes of study and investigation into chemical, mechanical, thermal, electrical, and so forth, these words implying fundamental distinctions, not so much in the nature of the phenomena, as in the way in which they must be observed and studied. The processes of the second class are, for the reason already mentioned, often spoken of as vital: First, because they are peculiar to living organisms; secondly, because they manifest themselves chiefly, but not by any means exclusively, in the structures to which we attribute the highest functions—brain, nerves, and muscles; and, thirdly, because

although we can investigate and measure the chemical, mechanical, thermal, and electrical changes which are associated with them, we are compelled to admit that there is an underlying process which we cannot bring our measuring instruments to bear upon. It was the illustrious A. v. Haller who first gave definite expression to the distinction which I have been indicating. The muscular parts—those which, when touched or irritated, shrink (but in reality change their form only, not their volume) he called irritable. The nerves by which, in man and animals, the brain receives impressions from the external world, and influences and regulates the action of the limbs and of the internal muscular and secreting organs, he saw to be endowed with another property analogous to it, but differing from it in its mode of manifestation, and called that property sensibility. For a nerve, although it does not, as a muscle does, undergo any visible change when excited or irritated, evidently does undergo an invisible change, because it produces shrinking of the muscles with which it is connected, either directly or through the sensorium. This property, by which a nerve, without undergoing visible change itself, responds to irritation by determining visible change in a muscular mechanism at a distance, Haller called sensibility, and thought to explain it on the crude hypothesis that the structure of a nerve is that of a tube containing liquid, capable of serving as a medium for the propagation of vibratory motion.

Haller's observations on irritability and sensibility exercised an extraordinary influence, for the doctrine which he founded upon them was perverted by contemporary physicians into a theory of disease, which became the basis of a system of medical practice. In this way both words have acquired a meaning different from that which Haller assigned to them, so that it has become necessary to discontinue their use. In reality the two properties which he designated by them are much more closely related than he supposed, there being in both a common element which we now ordinarily express by saying that all the structures or organs which Haller regarded as "sensible" or "irritable" are excitable. By this is meant, first, that every such structure undergoes a molecular change at the point which is touched or excited, whether this is done by light, as in the case of the retina, by sound, as in that of the internal ear, or by any other kind of motion; and, secondly, that this molecular change is propagated in definite directions in the living organism, giving rise to similar molecular changes in other parts.

Now, the systems of organs in which the phenomena of excitability chiefly, but not by any means exclusively, manifest themselves in the animal body—namely, the brain, spinal cord, muscles, and the organ of common and special sense—constitute the apparatus by which the animal maintains its relation with the external world. And if we confine our attention to animals low in the scale of intelligence, we find that the whole conduct of the individual, everything that we can observe as to its motives and motions, can be satisfactorily accounted for on two assumptions—namely, first, that of the existence in its nervous system—i.e., its brain, organs of sense, nerves and muscles of a property of excitability such as I have described and defined; and, secondly, that there exist in the same organs channels of great, but by no means inconceivably great, complexity, along which waves of excitation must pass. This inference, the value and extent of meaning of which depend on the completeness with which we are able to judge by observations of the behaviour of animals low in the scale of intelligence, goes by the name of animal automatism. I refer to it merely for the purpose of bringing you up to one of the lines of limitation of our subject of which I spoke just now. The observations on which it is founded have been chiefly made on the frog, among the most important and interesting being those contained in the classical essay of Professor Goltz.[1] When we extend them to creatures of high intelligence, such as the dog, the difficulties are greater, but still not such as might not be referred to the greater complexity of its intellectual life. However this may be, we come sooner or later into contact with a question which the methods which physiology employs cannot solve. The physiological student learns that in man the same mechanism exists as in the higher mammalia, and that from them we may descend by insensible gradations to the relatively unintelligent frog. If he realises this fact he is inevitably brought face to face with the question, how far man also is an automaton. With reference to this question, I would observe that although as it stands it is one which cannot be investigated by our methods, it suggests an inquiry which is not only possible but necessary and unavoidable—that namely, which relates to what is often called the mechanics of the central nervous system. The effort to explain even the most complicated acts as manifestations of the reaction of a living machinery to influences from outside, involving as it does an intimate knowledge of the structure and functions of that living mechanism and of all its parts, is one to which some of our best workers are giving their best work; but none of these men commit the gross error of supposing that the psychical concomitants of the excitatory process in the brain are things which our methods can help to explain. Towards the problem of the nature of these concomitants we can contribute nothing, simply because they are not things which we can compare with any standards we possess. All that we can do about them is to localise them, but in accomplishing this we are well aware that our researches neither help nor hinder us in the endeavour to penetrate the mystery of our own existence. All this is so plain that it would appear superfluous to state it were there not persons who need to be informed on the subject; persons who imagine that because our method is founded on the assumption that every material process is the product of material influences, every measurable effect the product of measurable causes, that we extend that method to things beyond our province—namely, to things which cannot be measured. A physiologist may be a philosopher if he has the gift for it, but from the moment that he enters the field of philosophy he leaves his tools behind him.

In observing the action of an organism, irrespectively of its form and development, we have before us, as we have seen, two distinct subjects of inquiry—namely, first, the nature of the chemical and physical processes which constitute its life; and, secondly, the way in which by virtue of the property of which I have spoken, that of excitability, these varied and complicated changes become mere answers to external impressions, and are thus regulated for the good of the whole. And we have further seen that in pursuing the inquiry from the simpler organisms to the more complicated, we are checked, not by the complexity of the phenomena, but by the encounter with something else which, as physiologists, we have no means of grasping.

Let us now proceed in the opposite direction—namely, downwards from the organism to the material from which it must have originated, and we shall come to a limit which is quite as sharply defined, but not of the same nature, with the one we have left. Let us suppose that we have before us a solution of a salt of ammonium, which is as limpid as water, and is known to be chemically pure—i.e., it contains nothing but the salt dissolved in it, and the gases of the atmosphere. After a time it is found that this liquid, which is now absolutely homogeneous, has ceased to be so—that it is peopled with little masses of apparently homogeneous material but definite form, each of which grows as a tree grows, and reacts to external influences as an animal does. This experiment, in which material just before apparently lifeless, becomes, as it were of itself, replete with life, has of late years become familiar to everyone, and has attracted to itself a special interest, because it is supposed to have to do with the origin of living from non-living matter. In reality it has little to do with this question, for it is easy to show that if common air and common water are excluded, the experiment fails—i.e., no living organisms come into existence. Notwithstanding, however, that this particular case has nothing to do with it, the question exists and is still unanswered. How, then, does it happen that year after year it remains untouched—put on the shelf as it were? Not because we are afraid of the issue, or because we regard it as outside of our province, like the question of the relation of consciousness to material processes, but simply because there appears at present to be no probability that the conditions for an experimental testing of the question will be realised. The moment that an instance of abiogenesis, as it has been called, presents itself, the duty of investigating it is at once recognised, and many investigations have been undertaken by able men for this purpose. Although these have yielded fruits of importance and value in relation to the physical and chemical conditions under which the simplest forms of life exist, and to the relation to higher organisms, they have been, as regards the main question, barren and unfruitful.

[1] Beiträge zur Lehre von den Functionen der Nervencentren des Frosches. (Berlin, 1869.)

And now I come to the second part of my subject—namely, to that of the use of physiological studies. And I will take it for granted that a chief purpose which we have in view in teaching physiology in Oxford is that we may prepare men who are specially fitted for the exercise of the profession of medicine—the art of healing. Is the knowledge of physiology necessary as a preparation for medicine? If it is, what sort of knowledge? In attempting to answer the first question we must not content ourselves with such vague statements as that inasmuch as medicine concerns the human body and its processes physiology, which relates to the same things, must be useful to the physician. All this is true, but the argument has this weak point in it—that it does not sufficiently take into account that medicine is not a science, but an art. In other words, if we want to determine rightly whether the future doctor is likely to be the better for what he learns in this Museum, we must take as our standard of fitness practical duty.

Let us try, then, to realise what it is to be at the bedside of a patient who is dangerously ill, and to have to ask oneself the question whether all has been done for him that can be done; or to be concerned in a surgical operation, in which the result depends as much on conscientious and skilful after-care in warding off the risks of infection, as in dexterous handling of the knife; or, finally, to be face to face with an outbreak of cholera or typhoid fever, and to have on the spot to devise and carry out the best means of prevention. Are our studies here calculated to fit men for these and like responsibilities and duties or not? The question is one which demands the gravest consideration, and all the more that, in my own profession, there are many who are inclined to believe that any such preparation is useless. In relation to conduct and responsibility, the position of the doctor is in this respect simpler than that of the statesman or of the lawyer, that he has directly to do with natural processes. Guided by the empirical rules of his art, he interferes in a certain way with the living mechanism, so as to do either harm or good. In the eye of the law and to his fellow-men he is justified or the contrary according as he can show that he has acted in conformity with the rules of practice—i.e., with the prevailing opinion at the time as to what is right. But his own conscience demands something much higher than this. Every strong and true man recognises it as his duty to act with a knowledge of the consequences of his action, to know what he is about in the fullest sense of the expression. To possess this knowledge, as I hope to be able to show you, he must be a physiologist, for the things about which he is to know are such as come exclusively within the range of physiological work and study. We must not, however, allow this consideration to betray us into the mistake of which we have several examples in the history of medicine during the last half of the eighteenth century and the beginning of the present of supposing that a system of practice can be built up on any other foundation than that of experience. We have already seen that the only way to understand the problems of life is to apply to them the known laws of physics and chemistry, and that in so far physiology is only a part of natural philosophy, but any attempt to reverse the process—i.e., to deduce the relations of vital phenomena from those of non-living matter without direct physiological experiment,—we know by experience to be futile. In like manner the physiologist who attempts to explain the origin and nature of disease on physiological principles, without subjecting these principles in their new applications to the test of experiment, commits an error of the same kind, and incurs a similar risk, for what physiology gives to medicine is not principles, but methods of observation. The title of "institutes of medicine," which is sometimes applied to it, really belongs to another branch of scientific inquiry, that which consists of the experimental investigation of the nature and origin of diseases, and of the external agents which either produce or counteract them. I must ask your attention for a few moments to this subject, because it is the link which connects the studies with which we occupy ourselves here, with the professional studies which will at a later period engage the attention of those of you who may intend to enter the medical profession.

The subject I have referred to is called pathology. Let me endeavour to explain what the word means. Forty years ago the teaching of pathology in the great medical schools of this country and Germany consisted of a lengthy historical discussion of the successive systems of medical doctrine which up to that time followed each other at intervals of something like ten years. Whatever influences such teaching may have had on thoughtful minds at once disappeared in presence of the great discoveries in physics, in chemistry, and in biology which marked the period I have mentioned. What we now mean by pathology has come into existence quite independently of the other, and has no relation to it. It does not concern itself much with what is thought, and still less with what has been thought in former times, about disease. It may be most truly described as the combined result of the observations and experiments of men of the last and present generation, among whose names some of the most distinguished are of men still in active life. It seeks for information as to the nature and causes of disease by two methods. One of these, the oldest and the best known, consists of the systematic study of diseases in those great institutions in which large numbers of sick persons are brought together for their own good, but also for that of the community. For our great hospitals are not merely charities, or even places of education, but at the same time pathological observatories, for the acquirement of knowledge valuable to all. The other method is the comparative one, its foundation being the study of disease in the lower animals in their relation to the corresponding diseases in man. As this comparative method is more recent, and therefore less generally known, I will ask permission to say a word or two as to its nature.

Just as in physiology we derive nine-tenths, or even a larger proportion, of the knowledge we possess from the observation of animals, so in pathology we gain a similar advantage from the investigation of animal diseases. That this source of information, until recently, has not been sufficiently appreciated is very easily understood. In the first place the community of nature between animals and man was not realised. It was forgotten that a dog is "fed with the same food, hurt by the same weapons, subject to the same diseases as a Christian is." Another reason is, that the close relation which ought to exist between the medical art and that which undertakes the treatment of animals, has been hitherto severed by social and professional distinctions, so that neither could profit by the other's knowledge and experience. I will try to illustrate the uses of the comparative method in pathology by one or two instances.

Among the most fatal of the ills to which human nature is subject are the so-called traumatic diseases—i.e., those consequent on external injuries or wounds, which do not, as they ought, immediately heal. Still more fatal are the more slowly developing tubercular diseases, which account for a very large proportion of the total mortality of this country. After these come the acute infective fevers, typhoid, scarlatina, &c., which, if they are dreaded more than the others, it is probably because we know more about them. If these three groups of maladies could be annihilated or brought under control, there would remain very little for much-suffering mortals to complain of. The first two are common to man and animals, and can be communicated from the one to the other. Of the third, most are peculiar to man, but a few are common. What practical use can we make of these facts?

During the last twenty years two discoveries in pathology have been made, both of them of great value in practical medicine, and both of them due to the comparative method. The first is the discovery that the traumatic diseases of which I have spoken arise, not from the trauma itself, but from the development of septic processes in it, and that this can be prevented by mechanical and chemical means; a discovery the value of which this university, two years ago, recognised by conferring its honorary degree on the great surgeon who made it. The second is that of the nature of the material cause—the contagium, as it is technically called—of the infective fevers. Now, both of these discoveries—the first indirectly (for Lister's earliest studies of traumatic disease related to the lower animals), the second directly and exclusively—were the offspring of the comparative method, the history of the latter being shortly as follows:—

About twenty-eight years ago the fact was discovered simultaneously in France and Germany that a peculiar microscopical organism, with which everyone is now familiar, existed in the blood of animals suffering from malignant anthrax, or, as it is called in France, charbon; but as so often happens, this discovery remained almost fruitless until seven or eight years ago a practitioner holding a position analogous to that of medical officer of health in a country town in North Germany, the name of which you have

probably never heard, set to work to investigate the subject, and furnished the experimental proof that the material cause of this particular disease is a plant capable of being cultivated outside of the body of the animal, which is, as the botanists say, its habitat. If this discovery of Dr. Koch had been made only for the benefit of the thousands of cattle that die annually of Siberian pest, as it is called, its interest for us would have been great, but much less than it actually is. Its chief value lies not in the immediate benefit conferred on cattle, but in its ulterior results for man. A few years before the time I have mentioned it had been proved that tuberculous disease is communicable from man to animals, and is therefore infective. In 1879 Dr. Koch, applying in a new direction the same modes of experimentation which had led him to his first discovery, found that the tubercular diseases which are so fatal to man stand in the same relation to an external, and therefore in its nature exterminable, cause as anthrax, a kind of knowledge which will, beyond the possibility of doubt, serve as the foundation for an efficient prophylaxis against pulmonary consumption and the other less familiar forms of tubercular disease connected with it by community of origin and of issue.

I have given you this hasty sketch of the science of medicine or pathology, because I did not see how the question which now interests us could be properly answered without our having some understanding of its aims and nature. In ordinary medical practice, a man is guided, as I have already said, by certain technical rules, which are or ought to be simply the embodiment of common experience as to the best way of dealing with particular cases. He requires therefore, first, knowledge of these empirical rules (this being what is meant by technical knowledge), and, secondly, skill in carrying them out. In ninety-nine cases out of a hundred these are sufficient guides, but in the hundredth his empirical knowledge fails him, and he has to fall back on knowledge which either he himself possesses or some other person of the nature and tendency of the disease, or of the action of remedies—in other words, on his knowledge of pathology. Similarly in the exercise of the other branch of the medical art, that which aims at the prevention of disease (often miscalled sanitary science), the physician depends, or ought to depend, entirely on his knowledge of the causes and nature of diseases—i.e., once more on pathology; and this, I may venture to add, is the only subject which it is of any real importance that he should know.

Thus, in the three kinds of duty which the doctor owes to the community—namely, first, to find out what is the matter with a sick man and foretell the issue of his disease; secondly, to do the best that can be done to counteract it; and, thirdly, to guard against the causes of disease—the physician who takes the highest view of his responsibilities requires to be a pathologist. And if you are satisfied that pathology has been to-day rightly defined, as the application, not of the principles of physiology, but of its methods to the study of the causes and nature of disease and of the mode of action of remedies, then you have good and sufficient reasons for the statement, that in order to know pathology you must have studied physiology, and to know physiology you must also have studied physics and chemistry. You have thus before you the evidence that the course of work you have to go through in preparation for the final examination in the Natural Science School, is not undertaken merely for the purpose of acquiring an honourable position, nor even as a training of your intellect for future effort, but as the best practical preparation for the divine art you hope in future to exercise.

And now I come to my final question. How ought physiology to be taught and studied in order that it may best accomplish its purpose as a *Vorbildung* for medicine? and I answer, where it most closely touches pathology. Virchow, who deserves more than any man of present or past times the title of founder of pathology, called the book in which he set forth the outlines of the subject by the title, Cellular Pathology. The term was perhaps open to objection, but he had a meaning in using it which you get at once if you substitute for cellular, elementary. The pathology which Virchow taught, and which has exercised so powerful an influence on medicine during the last thirty years—not, I once more repeat, by its doctrines but its method—was elementary pathology, the way in which diseases and their remedies affect the elementary processes of the organism—in other words, the functions of protoplasm.

In like manner, it is elementary physiology chiefly which you will have to work at here. You come to us, knowing nothing of what is called anatomy—nothing of the structure either of plant or animal, excepting so much as may have come to you without study, or perhaps just enough to have inspired you with the desire of knowing a little more. You witness for the first time with a scientific purpose—i.e., with a purpose to understand the causes of things—the manifold motions and processes of the living organism, and you learn the great Darwinian truth that these all work together in the way I have tried to explain to you to-day for the good of the whole. At the same time you discover that, whether mechanical or chemical, visible or molecular, all this work is done by living elements of extreme simplicity, which in the living laboratory perform the functions both of workers and of apparatus, so that the knowledge of the endowments of these elementary structures constitutes much more than the half of what you have to learn.

Perhaps some of you are aware that in the great schools of medicine in this country as well as abroad the order of preparatory study is different. It is thought desirable that the student should, before he attempts to understand the functions of the animal organism, learn the anatomy of man, and that, even after he has entered on his physiological studies, he should devote the greater part of his time to the studies of the dissecting-room. It is practically most advantageous to begin with anatomy, but there seems to be no reason why the anatomy first learnt should be that of man. However this may be, I think there can be no doubt that the position which has been for many years claimed for descriptive human anatomy in medical education is a wrong one.

At one time, say fifty years ago, the study of anatomy by dissection was the only practical work by which the student could train his powers of observation. There were no morphological or physiological laboratories, and scarcely any laboratories of chemistry in which students had the opportunity of learning science practically. This is no longer the case, and consequently, as a mere discipline, anatomy is scarcely wanted. There are, however, several purposes for which it must be thoroughly mastered—first, because it is an indispensable technical method as well in the study of morphology as in that of physiology; and, secondly, because it is required for the purposes of medicine and surgery.

In our great medical schools the ends of anatomical study are, I am afraid, sometimes lost sight of. Why should this subject, which in relation to morphology and physiology is so full of interest, be made as dry as the bones which the beginner handles? Why should he be compelled to devote as minute attention to details of structure of which the meaning is unknown, as to those of which the form or arrangement throws light on the development of the individual or the race, or to those of which the functions are vital, or the anatomical relations are of interest in surgery or medicine? The only answer I ever heard to this question is that human anatomy is unrivalled as a subject to examine upon.

But let me not be misunderstood. The greater part of the practical work you will have to do with Professor Moseley and myself will be anatomy, for our most important methods are anatomical. But it will not be dry anatomy; it will be anatomy studied with an intelligent purpose, with a view to something higher. Be therefore of good courage. Enter on your new work with the assurance which I now confidently give you, that you will find it easy and interesting—easy as compared with what you have already mastered in natural science, and, provided that you possess that essential characteristic endowment of the naturalist—the desire to discover the causes of the things—more interesting than anything in which you have hitherto been engaged. But I must temper this encouragement with a warning. Our studies are what the Germans call *Zeitraubend*. A great deal of time is required, and a great deal of devotion, to obtain a moderate amount of knowledge, moderate, I mean, as compared with what you might know. The reason is that the field of study is limitless, and that, in order to understand what you are about, you must observe as well as read. Observing occupies, whether you will or not, a great deal of time. If either from circumstances or inclination you feel that you cannot give these—that is, I think, a sufficient reason for at once abandoning biology in favour of some other more congenial study.

THE SURGICAL TREATMENT OF TUMOURS AND OTHER OBSCURE CONDITIONS OF THE BLADDER.

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(Concluded from page 632.)

CASE 4. *Villous growth near fundus; removal with spoon; temporary relief; death.* — L. S——, a man aged thirty-three, was admitted into the Royal Infirmary, under the care of Mr. Whitehead, on Oct. 7th, 1882. At the age of sixteen he had an attack of gonorrhœa followed by orchitis, which went on to suppuration. Three years ago he had a second attack of gonorrhœa, which lasted seven weeks. During the last sixteen months he has suffered from a frequent desire to micturate, accompanied by a scalding pain along the urethra. Three months later stricture of the urethra was detected. Since that time he has had a catheter passed frequently. During the last four months he has passed fifty or sixty small calculi, from the size of a pin's head to that of a small bean. Since the first catheterisation, thirteen months ago, the patient has noticed blood in the urine; a few days before admission this was alarming in quantity. At the time of admission he had a constant desire to make water, and there was a tingling sensation along the urethra while passing it. He had a slight pain above the pubes, which was relieved after micturition. He had also an itching pain at the end of the penis. The pain was not influenced by movement. He had also much pain in the perineum during defecation. Hæmorrhage was often increased at the end of micturition, but there was not and never had been hæmorrhage independently. There was no pain or tenderness in the loins. The urine was acid, sp. gr. 1018, normal in quantity, contained blood and pus, and consequently albumen. No casts detected by the microscope, but oxalate of lime crystals were seen. An examination with the sound revealed nothing but a little roughness at the base of the bladder. Nothing unusual was detected by rectal examination.—16th: The urethra was opened on a staff, and the finger passed into the bladder; by this means it was found possible to explore the whole of the bladder except the highest part of the fundus. The surface of the trigone was rough, but no distinct growth could be felt there; the tip of the finger, however, discovered a growth springing from the fundus, which was scraped away. A soft india-rubber tube was placed in the bladder through the perineal wound.—19th: The urine is free from blood, but still contains pus.—27th: Urine still free from blood. Perineal tube removed.—Nov. 1st.: The urine again contains blood.—11th: Hæmaturia continuing. The perineal incision was opened up and the bladder injected with solution of perchloride of iron.—14th: Hæmaturia continues. Bladder injected with solution of nitrate of silver, one grain to the ounce.—30th: Hæmaturia has continued off and on since the last note.—Dec.: Blood and pus have continued in the urine almost constantly during this month.—Jan. 8th, 1883: Patient improving; no blood in the urine; temperature normal; sent to the Convalescent Home at Cheadle. Dr. Grant's report states that on arrival at Cheadle the patient's temperature was 100°, and that on the following morning it rose to 104°. He complained of severe abdominal pain and tenderness, and suffered from great dyspnœa. There was slight dulness and abundant fine crepitations at the bases of both lungs. The dyspnœa was greater than would be accounted for by the condition of the lungs. Urine passed freely but was loaded with albumen. In a day or two the temperature sank to normal, but the other symptoms and physical signs remained unchanged. On the second morning before his death the patient had a severe convulsion. After this his asthenia rapidly increased, and he died on the morning of Jan. 17th.

Necropsy.—The left kidney weighed sixteen ounces; capsule smooth, not adherent; surface very pale and mottled. The section showed the organ to be a typical and extreme example of the "large white kidney." The pelvis was not dilated. The right kidney was converted into a mere bag of pus. All traces of renal structure had disappeared, and nothing was left but a sac with a hard, almost cartilaginous, wall about one-sixth of an inch thick and containing six or eight ounces of pus. Both ureters were pervious. The bladder was greatly contracted and the coats thickened. The interior was rough, though not distinctly fasciculated. The site from which the tumour had been removed was perfectly healthy and free from the least vestige of new growth.

(B.) IN FEMALES—BY RAPID DILATATION OF THE URETHRA.

CASE 5. *Sarcomatous growth on trigone; removal with spoon; recovery; recurrence; removal; recovery.*—A. F——, a widow, aged fifty-eight, states that about seventeen years ago she first suffered pain in passing water, and that her urine was then occasionally coloured with blood. She was treated with buchu, which alleviated her symptoms for some time. Of late years she has experienced much pain in passing water; the urine has at times contained large quantities of blood, and has constantly been more or less stained. She has noticed that her attacks of severest pain have been followed by the passage of many clots of blood, and that afterwards the pain has been much relieved. During the greater part of this period she has had menorrhagia, and latterly the menstrual intervals have been getting much shorter. In April, 1882, she suddenly became worse, and the urine was loaded with pus and blood. In May she was admitted to the infirmary, under Mr. Whitehead, with the symptoms stated above, but much aggravated. The urethra was rapidly dilated and the bladder explored by the finger; several masses of growth, some sessile and some pedunculated, were detected at the right of the trigone and the right side of the bladder. These masses were rounded and nodular; the largest of them was the size of half a walnut. These growths were removed by the finger and a Volkmann's spoon. After the operation she gradually improved in every respect, and in a month afterwards was discharged with no blood in the urine and painless micturition. Readmitted on Sept. 11th, she stated that for the first month after her discharge she continued well, then the pain returned; the urine had been generally milky-looking and occasionally had contained blood. When readmitted the urine contained blood and pus; she suffered much pain in the lower part of the back, and about the pelvis, chiefly caused by motion.—Oct. 5th: The pain has disappeared since resting in bed, but there has been a deposit of pus, and frequently blood has been passed. The bladder is washed out twice daily with a saturated solution of boracic acid.—Nov. 6th: The hæmaturia has been treated latterly by the injection of solutions of perchloride of iron. The hæmorrhage is less though it still occasionally occurs.—Dec. 11th: Patient has been much better lately. The urine has been free from blood, and the amount of pus less. She left the infirmary on Dec. 21st, 1882. There was then some hæmaturia, but the amount of blood was decidedly less than at an earlier period.—Jan. 14th, 1883: Patient again readmitted, very anæmic. There are pus and blood in the urine, the latter varying in quantity from day to day, and sometimes disappearing.—Feb. 9th: Patient was anæsthetised, and Mr. Whitehead again rapidly dilated the urethra and examined the bladder with the finger. A broadly pedunculated tumour about the size of a hen's egg was felt at the left side of the bladder near to the trigone, and higher up on the same side was a mass of infiltrated new growth; that side of the bladder was fixed. Much of the growth was pulled and scraped away by the finger and Volkmann's spoon. The bladder was then syringed out with warm water. There was but little hæmorrhage during the operation.—10th: Had a rigor last night, but is quite comfortable again. Temperature normal.—19th: Urine much clearer; no blood, but a little deposit consisting of mucus and pus. Very little pain during micturition.—March 15th: Still no blood in the urine. Urine faintly acid, and contains a little pus. Micturition altogether unattended with pain. Patient was discharged. On April 12th the patient declared herself better in every way. There had been no return of the hæmaturia, and in August she was able to walk out. The portion of tumour removed on the second occasion was found on microscopical examination to be finely papillated. It was a sarcoma composed mainly of large spindle cells, and in parts of round cells, and having a number of vascular projections ramifying in its substance.

CASE 6. *Papular growth on trigone; removal with spoon; recovery.*—M. F——, an unmarried female, aged thirty-two, was first seen by Mr. Whitehead on Jan. 3rd, 1883. She stated that about two years ago she first noticed blood in the urine; that twelve months later irritability of the bladder supervened, pain and frequency of micturition being intensified by movements such as in riding or walking. She had passed small fragments of calculus from time to time, but had not preserved a specimen. Of late the desire to pass water was almost incessant. The urine was offensive, contained a deposit of ropy mucus, and almost invariably blood in larger or smaller quantities. On the 6th Mr. Whitehead rapidly dilated the urethra, and explored the bladder with the finger; no calculus was detected, but two small papular growths were detected at the base of the trigone, and removed by a sharp scraper attached to a flexible stem; some flocculent detached mucous membrane encrusted with phosphatic matter was also withdrawn by the scoop. The after-treatment consisted in washing out the bladder twice daily with a concentrated solution of boracic acid.—Feb. 19th: Patient is quite well; water quite clear; not a single symptom remaining.

CLASS II.—WHERE NO TUMOUR WAS FOUND, BUT WHERE THE SYMPTOMS WERE RELIEVED AFTER PERINEAL URETHROTOMY HAD BEEN PERFORMED.

CASE 7. *Constant pain at the end of the penis; perineal urethrotomy; recovery.*—P. T——, a man aged fifty-three, admitted to the Manchester Royal Infirmary, under the care of Mr. Whitehead, on Oct. 31st, 1882. He had previously been twice in hospital for stricture of the urethra. He complains of intense and constant pain at the end of the penis; he has been under many forms of treatment, both instrumental and medical, without deriving any benefit. The urine flows slowly in a small stream, and is at times split; it is clear and acid; no hæmaturia. Instrumental examination detected neither stricture, calculus, nor any new growth. Rest in bed, milk diet, and mild aperients resulted in no improvement.—Nov. 5th: The membranous portion of the urethra was opened on a staff, and the finger introduced into the bladder, with some dilatation of the prostate. No unusual condition of the bladder was detected. —9th: As the urine ceased to flow either through the wound or by the urethra a soft catheter was introduced through the perineal incision, and the urine evacuated.—11th: Urine alkaline and purulent. Bladder washed out with weak Condy's fluid, at first once, and later on twice a day.—14th: Lately the urine had been passed without the catheter, but to-day it was again required. The patient latterly suffered much pain, both in the perineum and at the end of the penis.—21st: Pain and general condition much the same as mentioned in last note. Urine passes by the perineal incision. Patient is taking infusion of triticum repens.—30th: The same state of things mentioned in previous notes has continued up to date, there being pus in the urine, in variable quantities, daily. To-day there is more pus in the urine, and a great deal of pain over the region of the bladder. Bladder washed out with a solution of nitrate of silver (ten grains to the ounce).—Dec. 1st: A catheter could not be got into the bladder through the perineal wound, so it was passed along the urethra and the bladder washed out through it. The washing of the bladder with the solution of nitrate of silver was continued twice a day up to the time of his discharge, with the result of diminishing the amount of pus and albumen in the urine. On the discharge of the patient on Dec. 23rd, there was no pus in the urine and only a trace of albumen. Temperature normal. Urine continued to flow through the perineum as well as by the urethra. The pain at the end of the penis was quite cured.—May 27th, 1883: Patient has gained considerably in weight. A few drops of urine occasionally flow through the perineal incision.

CASE 8. *Obscure bladder symptoms and periprostatic abscess; perineal urethrotomy; recovery; death subsequently from phthisis.*—Mr. C——, aged forty-two, married, a patient of remarkably phthisical appearance, was seen by Mr. Whitehead, at the request of Dr. Guest, who stated that his lungs were considerably affected; his voice also suggested laryngeal phthisis; his left testicle was atrophied —a result of an abscess in that situation. He complained of a fixed and gnawing pain in the region of the bladder, constant desire to pass water, and violent straining after micturition. No foreign body could be detected in the bladder by means of a sound per rectum. Both vesiculæ seminales were ascertained to be enlarged.—Jan. 13th, 1883: The membranous urethra was opened on a staff, and the bladder explored by the finger with a negative result so far as the bladder was concerned, but a periprostatic abscess was opened during the operation; an indiarubber tube was introduced into the bladder and retained there. The operation was most successful in relieving the patient's sufferings, and he remained free from bladder symptoms to the time of his death. He died of phthisis on April 19th, 1883.

CASE 9. *Hæmaturia; perineal urethrotomy; recovery.*—E. S., a man aged seventy-three, was admitted to the infirmary on February 15th, 1883, under the care of Mr. F. Heath. He stated that he had passed blood in the urine for five weeks. At first the hæmorrhage was only slight in amount and at the end of micturition, but it soon became more abundant and uniformly mixed with the urine. On admission, the urine, which was freely passed in large quantities, had a bright-red colour due to blood, and was of low specific gravity and acid. Patient complained of pain in the lumbar region, but there was no tumour to be detected there. The prostate was much enlarged. Nothing could be detected in the bladder by means of the sound.—March 11th: The hæmaturia has been persistent since admission, and the patient is getting feeble and anæmic; the lumbar pain has disappeared. To-day Mr. Heath opened the membranous portion of the urethra on a staff, and passed the finger into the urethra, but owing to the stoutness of the patient and the large size of the prostate it was impossible to explore the interior of the blader, even when all the urine was allowed to escape, the patient profoundly under chloroform, and the combined pressure of two assistants concentrated over the pubes. A tube was introduced into the bladder and retained. On the day following the operation the urine was slightly blood-stained, but since then the hæmaturia has completely ceased. The tube was retained in the bladder for about a fortnight. By the end of March the urine had ceased to flow through the perineal incision, and remained free from blood. Patient was discharged, considering himself quite well, and a fortnight later there had been no return of the hæmaturia.

CASE 10. *Hæmaturia; perineal urethrotomy; temporary relief; recurrence of hæmaturia; death.*—J. H.——, a man aged sixty-four, was admitted to the infirmary, under Mr. Whitehead, on March 16th, 1883. About five years ago he had a "low fever," and during and after that he noticed small clots of blood in his urine. About three years ago he passed a stream of what he considered to be pure blood, and since then he has from time to time, with intervals of a month or so, passed blood and clots; he has suffered pain at the end of the penis, which has been relieved when he passed clots of blood; he has also been subject to pain in the lower part of the back, a symptom which has been relieved by micturition. Micturition has been frequent both by night and day. Latterly he has noticed, in addition to blood, a white tenacious substance—most probably mucus—in his urine. He has lost flesh considerably of late. On admission he had frequent and occasionally uncontrollable micturition. The pain at the lower part of the back was still relieved by micturition; he also complained of a pain, which he localised at about the neck of the bladder, just at the commencement of micturition; he had neither pain nor tenderness in the loins, and no enlargement could be detected in the region of the kidneys. There was no pain above the pubes; his urine was alkaline and contained blood and pus. No stone was detected by the sound, but the bladder seemed to be much contracted.—19th: Mr. Whitehead opened the membranous urethra on a staff and passed the finger into the bladder; no calculus or new growth was detected, but the bladder was rough and contracted. A soft indiarubber tube was placed in the bladder through the perineal opening. In the evening the temperature, which had been previously normal, rose to 102°, and on the following morning it reached 102 6°; tongue coated and dry. The bladder was washed out with a saturated solution of boracic acid.—22nd: Temperature normal; general health improving; urine slightly acid; boracic acid irrigation continued. —27th: Urine acid, but contains pus, and there have been clots occasionally since the last note.—April 9th: The discharge of blood and clots from the bladder has ceased, but the deposit of pus in the urine is as large as ever. The bladder is now injected with two ounces of a solution of nitrate of silver (five grains to the ounce), which is allowed to remain in the bladder for three minutes, and is then neutralised with a saturated solution of common salt, and the bladder freely washed out with the boracic acid solution.

May 2nd: The nitrate of silver solution, being well tolerated, has been gradually increased to from thirty grains to two ounces; this injection is repeated every other morning, and the boracic acid alone used on the other days. The deposit of pus in the urine is now greatly diminished; the reaction of the urine is neutral. There has been no return of the hæmaturia.—17th: Slight hæmaturia.—22nd: The hæmaturia has continued and patient is becoming exhausted; a solution of the perchloride of iron has been injected into the bladder.—25th: No return of the hæmaturia since the injection of the perchloride of iron; but the patient became more exhausted, and died to-day.

Necropsy.—The bladder was very small and its walls greatly thickened; the mucous membrane had a dark-slate colour, with here and there, and particularly about the neck, a very bright vascular point. Both ureters were dilated to the thickness of the forefinger. The pelves of both kidneys were dilated, and in the left one there was a quantity of sabulous phosphatic material. Both kidneys were firmer than natural; no suppuration.

We have collected from different sources twenty-eight cases of tumour of the bladder, of various kinds, occurring in the male, which were subjected to operation and removal; of these sixteen recovered from the operation and remained well for considerable periods, and twelve died within three months. Of the recoveries three have suffered from recurrence of the growth at periods of four, four and a half, and six months after the operation. The cause of death in the fatal cases can in only three of them be certainly attributed to the operation—viz., from peritonitis in two cases, and in the third from free and continuous bleeding. In four of them death is attributed to exhaustion; in two cases death took place from uræmia three months after the operation, and in one of these all spontaneous hæmorrhage was checked. In the remaining case death occurred a few days after the operation, but the cause of it is not stated.

The above statistics refer to operations of all kinds and tumours of all natures; but in estimating the value of operations in these cases, it is well to consider, apart from the others, the results of the operations performed fourteen times by Sir H. Thompson and by one of ourselves. All operations may be looked at from two points of view:—1. The risks attendant on the operation itself. 2. The success of the operation in removing, or relieving, the condition for which it was undertaken.

1. In calculating the risks of the operation we shall analyse, first, those cases in which a tumour was found; and, secondly, the total number of cases in which perineal urethrotomy has been performed, whether a tumour was detected or not. Of the fourteen cases in which a new growth was removed the patients recovered in eight; in two death took place so soon after the operation, that it may be reasonably attributed to it directly. In the remaining cases, death occurred in fourteen days from exhaustion in one, in two months from secondary growths in another, and in three months, in the remaining two, from uræmia. The total number of cases in which digital exploration of the male bladder has been performed is twenty-five, of which nine died, but seven of these recovered from the effects of the operation; so that, out of a total of twenty-five cases, the mortality of the operation is only two (eight per cent.)

2. With regard to the success of the operation in the eight patients who survived the removal of the tumours, we find that four have remained well up to the date of the latest reports; that three, after a period of apparent cure varying from four to six months, have had recurrence of the growth; and that one is returned as being only relieved by the operation. In the female the cases of bladder tumour submitted to operation number twenty-eight; of these the recoveries number thirteen, the deaths seven, and those whose symptoms have been relieved five.

From these figures it may be concluded that operations for removal of new growths from the bladder have been attended with results that will compare favourably with any other of the major operations in surgery; and when we consider the dangerous state to which many subjects of tumour in the bladder are reduced by hæmorrhage and pain, and when we further consider the number of pathological specimens of easily removable tumours which exist, in which marked and sometimes fatal hæmorrhage has been the only symptom, there is ample justification for exploration in these obscure cases, and for the removal of any growth that may be detected.

The justification for exploration of the bladder in cases which baffle diagnosis by the more common means is obvious if we bear in mind that digital exploration has been made during the last three years in twenty-nine cases, and that a tumour capable of removal has been found in eighteen of them.

The same operation also offers certain advantages in the treatment of chronic cystitis, for we secure a constant draining away of the irritating urine, and we are enabled to introduce into the bladder an unusually large double current tube, through which strong and voluminous solutions may be injected. There is a most marked difference in the tolerance of the urethra and the bladder of strong solutions of the perchloride of iron or the nitrate of silver. The feeble absorptive power of the bladder has been frequently demonstrated by Sir H. Thompson at University College Hospital, but the great tolerance of this viscus of strong irritants has not been so much insisted upon. It is not the same with regard to the urethra; if a drop of these solutions should find its way into the urethra most excruciating pain is produced. By means of the perineal opening a good opportunity is afforded of making applications to the bladder without the fear of the solutions leaking into the bulbous and spongy portion of the urethra.

Cases 7 and 10 illustrate the beneficial results of the injection of nitrate of silver in cases of obstinate chronic cystitis.

As an ordinary antiseptic injection a saturated solution of boracic acid and solutions of the permanganate of potash have been found the most effectual; whilst solutions of the perchloride of mercury, peroxide of hydrogen, and of the nitrate of silver have remedial properties of great and special value in obstinate and protracted cases of cystitis.

Manchester.

ON THE

SEASONS OF THE YEAR AND THE PREVALENCE OF ACUTE RHEUMATISM.

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IT is almost universally admitted that among the conditions which favour the development of acute rheumatism the seasons of the year play an important part; and several observers have noted the fact that in particular places at certain times the disease has been so common as to assume the character of an epidemic, a phenomenon ascribed either to undetermined atmospheric influences, or to the character of the weather being such as to afford abundant opportunities of "catching cold." It is obviously desirable to ascertain as far as possible the precise nature of the influences which bring about the prevalence of a disease of such importance; and for this purpose extensive statistics are required. Inasmuch as a very large number of cases of rheumatic fever is annually admitted to the medical wards of the London Hospital, I have thought that a collection and tabulation of facts[1] derived from the registers and case-books for a series of years, might serve as a useful contribution to the subject. Amongst the exciting causes of acute articular rheumatism, the following, or some of them, are enumerated by most authorities: (1) Exposure to cold, (2) to damp, (3) to cold and damp together, (4) vicissitudes of temperature, (5) that atmospheric condition known as "relaxing." As to the precise manner in which these influences act, opinions differ according to the view taken of the true nature of the disease. The great majority of writers, however, believe that chilling of the body is capable, under certain favourable conditions, of inducing an attack of rheumatism, and that the disease is most prevalent at seasons when chills are abundant. Such seasons are not, of course, the same in all countries, or in all parts of the same country, and various observers have described different periods of prevalence. John Haygarth[2] seems to have been the first English author to devote special attention to the subject. He tabulated 150 cases among the "higher and middle classes," in which the date of onset of the disease

[1] Collated whilst I was medical registrar, and now published by permission of the staff.

[2] Clinical History of the Acute Rheumatism, 1813.

was ascertained, occurring in his practice during thirty-four years at Chester. Of this total 27·3 per cent. belonged to the first quarter of the year, 26·6 to the second, 18 to the third, 28 to the fourth; the largest number for a month belonged to January, the smallest to August. From his statistics—which, however, include so few cases in each year as to render deductions unsatisfactory—Haygarth concludes that the disease is most frequent in "the five cold months" from December to April inclusive; "but," he adds, "no part of the year is exempt from this malady." More extensive statistics are given by Bateman.[3] This writer reports a number of cases of various diseases treated at the Public Dispensary during the twelve years 1804–16. According to his tables, out of 389 cases of acute rheumatism, 97 occurred in the spring quarter (March to May inclusive), 99 in the summer (June to August), 88 in the autumn (September to November), and 105 in the winter (December to February). Bateman gives no report of the occurrence of the disease in separate months. Although his total for the winter is the largest, and that for the autumn the smallest, it is noteworthy that in four of his twelve years rheumatism seems to have been more prevalent in the autumn than at any other season, and in four the summer holds the highest place. Scudamore[4] believes that "among the upper classes rheumatism occurs least frequently in winter, and most in autumn; among the labouring classes the largest proportion appears to take place in winter." Fuller, in his treatise on the disease (third edition, 1860), gives statistics of 449 cases of acute and subacute rheumatism admitted to St. George's Hospital during four years. From his table the following percentages may be calculated: for the first quarter 27·8, for the second 25, for the third 19·8, for the fourth 27·1. The maximum for a month belongs to November, the minimum to July. Fuller gives his opinion that "it is not in the most inclement seasons that rheumatism is most prevalent, but at those seasons remarkable for damp and variable weather. The disease occurs less frequently in the frosty month of December than in the warmer but relaxing month of May." Watson[5] says: "I know of no other exciting cause of rheumatism than exposure to cold, and especially to cold combined with moisture." Aitken[6] observes that "cold and wet, by lowering the vitality of parts, greatly assist or promote that condition of the system which develops rheumatism. ..... Rheumatism is most prevalent at seasons remarkable for damp and variable weather. ..... A predisposing cause of rheumatism lies not so much in the abstract degree of cold as in the range of atmospheric vicissitudes."[7] Garrod[8] quotes Aitken's conclusions with approval. Roberts[9] says that "the affection occurs mainly in temperate but moist climates, and where there are sudden changes of temperature; and the same conditions influence the prevalence of the complaint at different seasons. ..... The ordinary exciting cause is a sudden chill." According to Bristowe,[10] "inasmuch as rheumatism depends essentially on vicissitudes of temperature and other allied conditions, it is of especially common occurrence in cold, damp, and more particularly variable climates, and during the seasons of the year in which these conditions prevail." Mitchell Bruce[11] states that "the most common exciting cause of acute rheumatism is exposure to cold and wet; or, to express the same fact in other words, the disease has an intimate etiological relation to weather, season, and climate. Some apparent exceptions to this statement really accord with it: thus acute rheumatism is not uncommon in warm weather, on account of the frequency of chills from over-heating." Buchan and Mitchell[12] refer to the mortality from "rheumatism" in London during a period of thirty years. "The minimum mortality," they say, "occurs in August and the beginning of September, after which it rises to its maximum in the end of November and the beginning of December. It then falls somewhat, but still keeps above the average to the end of April." This statement would be of great value to us in our inquiry, even though it only deals with fatal cases, were it not for the unfortunate fact that the authors were obliged to content themselves with the alleged causes of death as given by the Registrar-General, and it is of course far from clear what the term "rheumatism" means in his returns.

In France opinion has been much divided as to the influence of season and weather upon the prevalence of the disease. According to Chomel (quoted by Bouillaud), "whilst the influence of cold is evident in the production of muscular rheumatism for articular rheumatism this cause can scarcely be said to exist." Bouillaud,[13] on the other hand, says: "With regard to the determining causes of the disease, they are reduced in the last analysis to a solitary one—namely, the action of cold, especially damp cold; and this is most powerful when it acts upon a body which has previously been immoderately heated. ..... Articular rheumatism occurs most frequently in seasons when vicissitudes of cold and heat are very common. ..... It develops under the same atmospheric conditions as other recognised inflammations, such as bronchitis, pleurisy, &c." Bouillaud was here arguing in favour of the view that rheumatism is strictly an inflammatory disease, and he repeated and expanded the above statements in his "Traité Clinique," 1840. Ernest Besnier, the writer of the exhaustive article in the "Dictionnaire Encyclopédique des Sciences Médicales," 1876, is quite opposed to the "tradition banale," that cold, wet, or variable seasons are favourable to the genesis of rheumatism, and, founding his conclusions upon the statistics of the Paris hospitals, asserts that the disease is "a permanent one, belonging to all seasons, occasionally, indeed, exhibiting certain local and temporary explosions, which depend upon accidental atmospheric conditions, but, as a rule, occurring with almost equal frequency throughout all the changing seasons." If the seasons have any influence in determining its prevalence, Besnier finds that it is the summer which furnishes the most favourable conditions, and the hot month of July, which is most prolific of rheumatism. According to his statistical table (which comprises by far the largest number of cases which I have met with, but which has the disadvantage of exhibiting the records of only four years) July had a total of 861 cases out of 8631; the minimum was in January, and the percentages for the four quarters of the year were as follows:—First quarter, 22·3; second, 26·9; third, 26; fourth, 24·5. Besnier formulates his conclusions thus: "Acute articular rheumatism, so far as regards its frequency of occurrence, is influenced to a very limited extent by the regular succession of the seasons; nevertheless, in Paris the largest number of cases is observed in summer and spring." The same result appears to have been arrived at in the Lyons hospitals;[14] and Georges Homolle, in Jaccoud's "Nouveau Dictionnaire," 1882, refers to this "verno-æstival paroxysm" as an observed feature of the disease. According to this writer, among the external causes of rheumatism a chill is the most common. He adds that "it does not appear that absolute lowering of the temperature has a preponderating influence; the severe cold of winter is not favourable to the development of the complaint; the dangerous thing is the abstraction of heat from the cutaneous surface when the circulation in that part is very active." Turning to German authorities, Niemeyer's opinion was that "at some times, particularly during winter and spring, the disease is so common that the number of cases reminds us of an epidemic; in summer and autumn the cases are usually solitary." Senator[15] says, "Opportunities of catching cold are most abundant during spring and autumn with their frequent and sudden changes of temperature; hence the greater prevalence of polyarthritis at such times." Senator quotes the figures of a number of continental observers, from which the following percentages for the four quarters of the year may be calculated. The Berlin statistics (1867–1869) for 1094 cases, give for the first quarter nearly 35 per cent., for the second more than 27, for the third not quite 14, for the fourth more than 23. Wunderlich's figures are: first quarter 30·3 per cent., second 23·5, third 17·9, fourth 28·08. Fiedler states that at the Dresden Hospital, out of 651 patients, 27·19 per cent. came under treatment in the first quarter, 27·34 in the second, 16·74 in the third, and

[3] Reports on the Diseases of London and the State of the Weather, 1819.
[4] Nature and Cure of Rheumatism, 1827.
[5] Practice of Medicine.
[6] Practice of Medicine.
[7] Dr. Aitken adds: "Dr. Haygarth has estimated that the number of persons attacked with rheumatism in summer is to those attacked in winter in the proportion of five to seven." This is not strictly accurate. Haygarth did not speak of winter and summer; he divided the year into "five cold months" (December to April) and "seven warmer" (May to November), and finding that exactly half his cases occurred in the former period and half in the latter, he wrote: "It is evident, therefore, that in the cases here recorded the colder were more liable to it than the warmer seasons, in the proportion of seven to five."
[8] Reynolds's System of Medicine.
[9] Practice of Medicine.
[10] Practice of Medicine.
[11] Quain's Dictionary of Medicine.
[12] Journ. Scott. Meteor. Soc., Nos. 43 to 46.
[13] Nouvelles Recherches sur le Rheumatisme Artic. Aigu, 1836.
[14] Statistiques des Services de Médecine des Hôpitaux, 1872, quoted by Besnier.
[15] Ziemssen's Cyclopædia.

28·73 in the fourth. Lebert's statistics of 220 cases at Zurich give 27·4 per cent. for the first quarter, 31·8 for the second, 20·2 for the third, 20·6 for the fourth. Huber (for 90 cases at Munich) found the largest percentage, 32·22, to belong to the last quarter; the next, 30, to the first; 26·66 to the second; while in the third the percentage sank as low as 11·11. Roth's percentages (for 79 cases at Würtzburg) were 30·2 for the first quarter, 36·5 for the second, 16·3 for the third, 27·7 for the fourth. It will be observed that all the statistics just quoted agree in representing rheumatism as least prevalent in the third quarter of the year. With regard to the frequency of cases in individual months, the maximum number admitted to the Rudolfs-pital in Vienna in 1871 and 1872 occurred in February and December; at Copenhagen, in the period from 1842 to 1865, Lange found the maximum to be in January; at Zurich, from 1853 to 1859 the highest percentage was in April.

It seemed desirable to preface my statistics with these facts, figures, and opinions, derived from various sources, in order to present a sketch of some of the results arrived at by observers in different places. It should be added that a respectable minority of writers agree with Besnier that the prevalence of the disease has no relation to the seasons. Thus, in Norway, Thoresen,[16] after analysing his cases for twenty-five years, comes to the conclusion that rheumatism is probably a malarial disease, the frequency of which is independent of the state of the weather. The number of his cases is, however, so very small (277) for the long period of observation, that his conclusion on the subject has but little value. Statistics bearing on this matter must fulfil two conditions: they must deal with a large total, and extend over a considerable number of years. Most of those which I have quoted seem to fail in one or other of these points. The statistics which I have compiled include 2000 cases, 1095 males and 905 females, admitted to the London Hospital during the nine years from 1873 to 1881 inclusive. This number includes cases of both acute and subacute rheumatism, since it seems to be practically impossible to draw a line of distinction between the two classes; but in every instance there was a diagnosis of true articular rheumatism—acute rheumatoid arthritis and cases where the joint affection was doubtful have been strictly excluded. During the period under consideration rather more than 22,900 patients suffering from various diseases were admitted to the medical wards; it thus appears that 8·7 per cent. of the total were cases of rheumatic fever, a proportion which may in some measure indicate the ordinary degree of prevalence of the disease in the districts supplying the hospital.

In drawing up the statistics it occurred to me that, since it is believed that one attack of rheumatic fever predisposes to subsequent attacks, the exciting causes of such later attacks might differ in degree or in kind from those of the first. For this reason I have separately tabulated those cases of which it is stated that the patient had no previous similar illness; and the annexed table shows for each month of the nine years both the total number of cases admitted and the number of recorded first attacks. It must be noted, however, that in a good many cases the records are incomplete with regard to previous history of rheumatism; so that, whilst these omissions seem to be distributed pretty evenly over each year, it must be borne in mind that in all probability the number of the first attacks is understated, and that no comparison can be safely made between the different years of the series with regard to these cases. A second obvious source of error is that the table shows the date, not of the occurrence of the disease, but of its coming under treatment; a certain proportion of the total assigned to each month belongs in reality to some previous period. But since this error is spread over all the months, it does not vitiate the statistics to an important extent; in any case it is unavoidable.

An examination of this table will show that the month of November had the largest number of admissions in five out of the nine years, October in three, June in one. The lowest point was reached three times in April, twice in March, once in February, once in June; in one year January, March, and May were equal for the lowest place, and in one February and August held the same position. Of the total of 2000 cases, the maximum for a month belongs to November, the minimum to March, the former more than doubling the latter. 20·95 per cent. were admitted in the first quarter, 20·65 in the second, 25·20 in the third, 33·20 in the fourth. In eight out of the nine years the third quarter had a larger number than the second, and the fourth had the largest of all. It will be seen that these statistics differ remarkably from the continental figures quoted above, which nearly all agree in giving the lowest place to the third quarter. Or if we adopt what appears to be a more rational division of the year into seasons, we find that 18·9 per cent. of the total were admitted in the spring (March, April, May); 24·3 in the summer (June, July, August); 31·8 in the autumn (September, October, November); 24·9 in the winter (December, January, February). In all the years save one there were more cases admitted in summer than in spring. The statistics of first attacks give similar results. Of the 738 recorded cases of this class, 17·8 per cent. were admitted in the spring, 23·8 in the summer, 33·0 in the autumn, and 25·2 in the winter. November had by far the largest total, April the smallest.

(To be concluded.)

Table showing Monthly Admissions of Acute Rheumatism to the London Hospital for a Period of Nine Years.

		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1873	Total	7	11	7	11	7	11	15	11	9	19	22	21
	First attacks	3	4	3	4	2	2	2	2	1	5	3	2
1874	Total	13	11	6	12	10	15	16	16	27	33	41	23
	First attacks	1	2	1	3	5	4	7	3	10	18	15	11
1875	Total	26	12	13	10	13	13	14	19	16	24	23	22
	First attacks	11	5	4	3	7	7	6	8	5	12	10	5
1876	Total	20	25	17	18	18	12	20	17	21	26	24	18
	First attacks	5	8	4	2	1	0	6	2	5	4	9	4
1877	Total	23	18	9	24	17	17	20	21	23	33	28	30
	First attacks	7	8	1	8	6	3	5	4	2	6	5	6
1878	Total	25	9	15	18	12	23	15	9	11	18	19	13
	First attacks	13	2	7	9	5	8	5	2	5	10	9	5
1879	Total	13	16	17	8	9	15	11	15	14	16	21	16
	First attacks	3	5	6	1	4	7	5	4	6	4	9	10
1880	Total	16	14	20	6	16	20	28	26	25	30	35	28
	First attacks	9	7	11	2	11	14	18	15	11	22	20	17
1881	Total	22	16	18	20	28	32	30	25	28	22	35	30
	First attacks	9	5	7	3	12	14	13	10	10	7	21	19
Total for nine years		165	132	122	127	130	156	171	139	174	215	248	201
Total first attacks		61	46	44	35	53	59	67	50	55	83	101	79

[16] Norsk Magazin for Lœgevidenskaben, 1880.

ON A CASE OF

OBSTRUCTION OF THE BOWELS DUE TO VOLVULUS, TREATED BY ABDOMINAL SECTION; RECOVERY.

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Clinical History.—H. G——, aged thirty-two, miner, was admitted into Ward 9 of the Glasgow Royal Infirmary on Feb. 2nd, 1883, under the care of Dr. Robert Perry. He complained of a stoppage of the bowels of seven days' duration, with great pain over the whole abdomen, as well as pain in micturition. The pain came on suddenly when he was at work, being at first located in the left iliac fossa, but soon spreading over the whole abdomen. Purgatives had been repeatedly administered before admission, both by the mouth and rectum, but had produced no effect. On admission, the abdomen was found to be much distended, tense, and tympanitic, but not tender under pressure. Percussion revealed no dull area, nor was there any external evidence of hernial protrusion. The heart was displaced upwards, but was otherwise normal. There was no vomiting. The pulse was good and the temperature normal. On Feb. 3rd the patient had considerable pain and a feeling of twisting in the abdomen. An enema containing some castor oil and turpentine was administered; it passed pretty readily into the bowel and was retained for some time, but was returned without bringing away any fæcal matter. A hypodermic injection of morphia was given to allay pain, and one-third of a grain of extract of belladonna ordered to be administered by the mouth three times daily; small quantities of iced milk was the only food taken. On the 4th the abdomen was distended with gas, and more markedly in the course of the colon than over the small intestines. Dr. Perry called me in consultation, and it was agreed to have recourse to colo-puncture. This was peformed at the upper part of the descending colon; a large quantity of fetid gas escaped through the cannula, the distension of the bowels was much diminished and the patient expressed himself as a good deal relieved. The girth of the abdomen after the colo-puncture was thirty-five inches. Pulse 76, of fair strength. Temperature in the morning 98·2°, in the evening 100·4°. An enema was again administered in the evening of this day, but with no effect. The patient continued much in the same state for several days. The abdomen became much distended by accumulation of gas, and relief was always experienced from puncture of the colon, which wa irepeated on Feb. 5th, 10th, 13th, and 18th. Paroxysms of pain came on twice daily, and sometimes more frequently, during which there was evidently powerful peristalsis going on; the pain was subdued by the use of hypodermic injections and by hot fomentations, but the benefit obtained in this way was clearly only temporary, and no real progress was made. In the hope that increased contraction of the muscular coat of the bowel might lead to the removal of the obstruction, it was ordered on the 7th that the abdomen should be well rubbed with warm castor oil and kneaded with the hand; and on the 10th a weak current of electricity was applied for about a quarter of an hour. On the 12th the patient had a large enema of salt-and-water, the last portion of which brought away a few bits of hardened fæces, each about the size of a walnut; during the evening he had a constant desire to pass something from the bowels, rising frequently to the stool, but obtained no relief. On the 20th Dr. Perry's journal report runs as follows: "Abdomen again becoming much distended, and paroxysms of pain more frequent. Patient looks more anxious, and is more rapidly emaciating during the last few days. Although a little flatus has from time to time been passed per anum, there has been nothing more voided. An enema again given last night was retained only a very short time, and brought nothing of fæcal matter with it. It was quite evident that, except the obstruction of the bowels (which had now lasted twenty-five days) was speedily removed, the patient must slowly sink. There was no vomiting, and very little evidence of peritonitis; and taking everything into consideration, Dr. Perry and Mr. Clark agreed that it was a favourable case for gastrotomy."

Operation.—A consultation having been held, at which two physicians and two surgeons were present, it was decided to perform abdominal section. The patient was therefore anæsthetised by means of ether, and when fully under its influence a rectal exploration was made which showed the existence of an obstruction very near to the anus. The abdomen and pubes were now shaved, and an incision was made in the middle line from the umbilicus to the pubes, and was afterwards carried a little higher up to the left of the umbilicus, the total length of the incision being about eight inches. The peritoneum being exposed, a small portion was picked up with the forceps and cut, and, a director being introduced, was slit up to the entire extent of the external incision. An enormously distended portion of the bowel now came into view, looking at first sight like a dilated stomach; it was rather congested, contained a large quantity of gas and fæces, and presented none of the characteristic appearances of large intestine. When this was brought out through the wound the hand could be passed down beside it into the pelvis, and a constriction easily made out, occupying the lower part of the rectum. It thus became evident that the distended portion was colon, and examination soon showed that this had become twisted by the sigmoid and descending portions passing around the upper part of the rectum, thus crossing the lower part of the abdominal cavity from left to right, and returning at a higher level from right to left. By twisting the enlarged portion in the opposite direction, so as to make three half turns from right to left, the constriction was readily removed, and it was gratifying to note that apparently no structural change had taken place in the portion of bowel so constricted. The descending meso-colon was so lax that a portion of the descending colon had passed over to the other side of the abdomen, and was found near the right iliac fossa. Beyond some slight congestion of the peritoneum, and the presence of a few flakes of lymph, nothing abnormal was observed in the peritoneal cavity. The question now was how to reduce the bowel to such dimensions as to allow of its being returned to the abdominal cavity, which proved a task of greater difficulty than was anticipated. Gentle pressure on the bag produced little expulsion of gas, and none at all of fæces, so that it was found necessary to introduce a large tube into the rectum, and pass it well into the distended bowel. But even then the expulsion was not effective, as the major part of the bowel contents consisted of fæces which were too solid to pass through the tube; we therefore introduced, by means of a Higginson's enema syringe, large quantities of olive oil and warm water, and thus managed to evacuate a considerable quantity of fæces. It was necessary, however, to repeat this process of washing out the bowel five or six times before there was a sufficient reduction in the size of the sac, our later experiences tending to show that warm water alone (so warm as to be only just borne by the hand) was more effective than the mixture of oil and water. This washing out took a long time to accomplish, and during the whole period the bowel was out on the abdominal wall, covered with towels dipped in a hot watery solution of carbolic acid (1 in 60), the count up at the end of the operation showing that three dozen towels had been so employed. At length the bowel was safely returned, and a search in the peritoneal cavity showing that no other manipulation was required, we proceeded to close the wound. Three deep stitches of chromic acid gut were passed through about the centre of the rectus muscle on each side, and fastened by means of pairs of buttons; the peritoneum was next stitched with chromic gut, and the superficial part of the wound closed with sulphurous chromic gut sutures in two sets—long ones to approximate the mass of the walls, and short intermediate ones to accurately bring together the cut edges of the skin. The operation had been commenced under the spray, but when the bowel was covered by towels its use was no longer necessary; on the bowel being replaced it was renewed, and was maintained till the dressing was applied. The latter consisted of the usual layer of protective, wet and dry gauze and gauze dressing, with jaconette; and, finally, a bandage of elastic webbing on the outside. The operation lasted fully two hours, during the whole of which time the patient's pulse kept good and the breathing easy and regular. The anæsthetic was sometimes ether and sometimes chloroform, the change depending on the state of the patient; it was administered by Mr. Wilson, my house-surgeon, and I was most ably assisted by Dr. Macewen, and by Mr. Stewart, Dr. Perry's house-physician. When the patient became conscious he expressed himself as feeling much relieved. He was ordered to be kept strictly to ice and milk, and to have one grain of solid opium at night. The same evening the temperature was 101·8°, and pulse 120. Passed a

good night, feeling very little pain, but had retention of urine, and the catheter had to be used every eight hours; the urine drawn off had a slightly smoky appearance, possibly due to absorption of carbolic acid. The temperature twenty hours after the operation was 99·8°. It is not necessary to follow the progress of the case from day to day; the patient got on excellently, the wound healing very kindly, and the abdomen resuming its natural appearance. On two occasions there was a slight rise of temperature, this being accounted for in the first instance by a small abscess forming in the arm where a hypodermic injection had been introduced, and in the second by a slight accumulation of pus in the sheath of the rectus after the antiseptic dressings had been dispensed with. A copious alvine evacuation took place on the third day after the operation; it came away without the patient being able to control it, and this loss of control lasted for the next two weeks, gradually, however, passing off. For several days there was diarrhœa, and for this I recommended that more solid food should be given, as up to this time the patient had been kept on beef-tea and milk. This slight drawback did not seriously impede the progress of the patient, he made a most excellent recovery, and was dismissed convalescent on March 28th, five weeks after the operation.

Remarks.—The course of the case as detailed in the foregoing notes presents many features of interest, and it is well to consider these, not only as they have a bearing on the progress of our patient, but as aiding us in the diagnosis or directing our treatment in cases of a like nature. Volvulus is one of the rarest causes of intestinal obstruction, its rarity depending on the normal connexions of the bowels by means of the peritoneal processes; it is therefore singular to note that in most of the recorded cases the twist has been found in the large intestine. I say it is singular because this is the most fixed portion of the bowel, for in the majority of instances not only is the ascending and descending colon bound down to the posterior wall of the abdomen by peritoneum covering only its front and sides, but also the hepatic and splenic flexures are especially firmly connected with the wall, the latter indeed being kept in place by one of the strongest of the peritoneal folds called the costo-colic ligament. The rectum has invariably a double fold of peritoneum or "meso-rectum," and is thus in the upper part free to move from side to side, and the sigmoid flexure has often a double fold or "sigmoid meso-colon." When this is the case a considerable freedom of movement of that part of the great bowel lying in the left iliac fossa is allowed. Pollock experimented by the injection of water into the rectum in the dead subject, and found that when there was a distinct and large sigmoid meso-colon, "this portion of the bowel was first seen to bulge forward and then gradually rise up towards the diaphragm."[1] When, however, there exists, as in the case before us there was found to be, a descending meso-colon, still greater freedom of movement is permitted, and the costo-colic ligament may be so lax originally, or may become so stretched, as to permit of the descent of the splenic flexure, so that it is possible for it to pass across the lower part of the abdomen, and to twist round the sigmoid flexure or upper part of the rectum. While, therefore, it is not difficult to understand the mechanism by which volvulus is brought about, it is at the same time easy to understand why the affection is so rare, since it depends for its production on an abnormal arrangement of the peritoneal folds, a condition not in itself, as far as I am aware, conducive to constipation, but certainly permitting a more free excursion of the bowel, and so increasing the risk of twisting if any arrest of the fæcal flow take place. The affection is generally marked by great obscurity in the symptoms. There is, of course, marked obstruction, and this may exist for many weeks without any great urgency in the symptoms; in our case, although twenty-five days had elapsed without a motion, the patient was not in any great distress, his pulse was full and steady, he could and did readily take food, and he slept fairly well. In these respects the case presented a marked contrast to the picture of volvulus drawn by Brinton in his Lectures on Intestinal Obstruction, for he says: "In its phenomena, as contrasted with those of obstruction generally, we see duration shortened, inflammation paramount, and, as regards the bowel, paralysis early and frequent, peristalsis often subdued from the very first onset" (p. 86). In not a single particular does this description hold true with regard to the case under discussion. A curious feature, well exemplified in our patient, is that not unfrequently in volvulus injections may be readily passed into the bowel and are thus retained, leading to the conclusion that the obstruction is higher up, the truth being that the twist is not tight enough to prevent fluids being passed up, but forms a valve-like fold, effectually preventing any return. This character presents a serious difficulty as regards diagnosis, but it is an important point, taken in conjunction with the other symptoms, and should have its place in the consideration of all cases where volvulus may be the possible cause of the obstruction. Another puzzling feature was the entire absence of vomiting. We know that in all cases where the obstruction is low down, vomiting takes place late in the history, but I know of no recorded cases where it is stated to have been entirely absent. Both this and the very chronic nature of the affection were dependent on the healthy and strong condition of the bowel-wall; the colon formed a large sac, in which the fæces went on accumulating, and as the gas was removed by colo-puncture room was left for the further storage of fæces. Indeed, it might have gone on for many days longer without any serious result taking place. Volvulus is frequently marked by great flattening of the abdomen at one part and distension at another (Erichsen); but this was not noted in our case, but what was observed was as follows:—Periodically the man had extreme paroxysms of pain, caused by active and powerful peristalsis, and at such times there was marked indrawing of the abdomen in the middle line, between the umbilicus and pubes, with bulging of the surrounding parts, more especially of the left lumbar and iliac regions. The twist had probably taken place at first in the sigmoid flexure, and gradually worked down; for it was found at the operation to be situated low down in the rectum, whereas in the earlier treatment of the case rectal examination furnished no evidence of obstruction in that part of the bowel. The patient frequently complained of the sensation of twisting of the bowel, but it is at all times difficult to know how much or little value to attach to the feeling of the patient; still, it is worthy of note that this was a prominent symptom in the present case, and that knowledge may be of use in the diagnosis of other cases of a like nature.

Treatment.—A few words as to the treatment will suffice. Had we in the first instance distinguished the case as one of volvulus, we should not have recommended or adopted treatment by means of abdominal friction or the continuous current, as there can be no doubt that the twisting was likely to be thereby increased; but the symptoms were very obscure, and the fact that enemata passed pretty freely into the colon led us to hope that the obstruction might be transient, and that increased peristalsis might result in the re-opening of the passage. It is possible that by the introduction of the hand into the rectum in the early stage of the affection the twist in the bowel might have been overcome, but this experiment would have been attended by considerable risk of perforation of the bowel, for in at least one recorded instance where this was tried the bowel was found after death to have been lacerated by the attempt. Nor would it have been easy to have undone the twist even if the hand could have been introduced; indeed the only possibility of such a favourable result lies in its being practicable to unload the bowel beforehand by means of a long tube introduced into the distended gut. As Pollock well observes, "It may be stated as an axiom in these cases that, once formed, the twist prevents the escape of the contents, and the contents of the twisted portion maintains the distortion, and to remedy the latter the contents must be removed." If such a case comes under my notice again, I shall feel inclined to try what can be done in the way of unloading the bowel by the aid of a long and large rectal tube, and then attempt to untwist the twisted portion. Very great benefit was experienced from the use of colo-puncture, large quantities of gas being thus got rid of. It was practised six times, and on each occasion produced a reduction of girth of about three inches; it was, however, soon apparent that this treatment was merely palliative, and the fact that after the evacuation of fetid gas small quantities of semi-fluid fæces began to pass through the cannula, showed that the bowel contained a large amount of fæcal matter which could only be removed by some other means. The question thus became one of operative procedure. Colotomy might be successful as regards a free outlet for the intestinal contents, and might save the life of the patient, but it had two disadvantages—it would leave an artificial anus, and we should

[1] Holmes's System of Surgery, second edition, vol. iv., p. 608.

be still in the dark as to the nature of the affection, and might possibly leave that condition unrelieved. Abdominal section on the other hand, though more risky, ensured that we should truly ascertain what we had to deal with, and should thus be able more effectually to remedy the diseased state. The success of our operation was in great measure due to the fact that we had a strong and healthy patient to deal with, that very little constitutional disturbance had resulted from the long constipation, and that the peritonitis had been so slight in degree and limited in extent; but we can also claim that by performing abdominal section when we did we gave the patient the best chance of life and cure. The result is certainly encouraging, and in the treatment of abdominal obstruction, where every experience is instructive, this one may be of use in inciting others to a more early and active treatment than is commonly adopted, for it is, we fear, too much the custom to wait till the patient is moribund, and then very wisely decide that he is too far gone for operation.

Glasgow.

SEASIDE DRINKING WATER.

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A NOTE in THE LANCET of Sept. 15th induces me to give some of my experience on its subject. During a varied experience of Southern India I had an opportunity of examining the water-supply of many of its stations, and thus controlling the accounts given of the water-supply of many other stations. A great part of Southern India is "seaside," and much that is now dry land, even plateau-land 1000 feet high, has been seaside at a comparatively recent geological period. The recognition of this led me to use water-analysis as a means of geological investigation as a test of the past history of the country, and the results of prolonged investigation led me to discredit a great part of the sanitary opinions deduced from analyses of water made without sufficient recognition of the past history of the soil. The presence of much chlorides in water is too often concluded to be due to sewage contamination. Waters must not be judged from some abstract standard of purity; in each locality there is a general standard of pure subsoil water, to which the various waters may be referred, and the cause of deviations from the standard must be investigated. More or less salinity may arise, not only from the mineral part of sewage, but from marine salts deposited in various ways:—1. From old deposits in a soil not long risen from the sea. 2. From the residue of saline rain water. 3. From the migration of deposits down the subsoil of a valley to a previously pure spot. Another supposed source is the infiltration of sea water into wells near the shore. But this is far less frequent than is supposed. There may be wells of desalinated sea water, of water purified from salt by filtration; but I doubt whether there are many instances of wells in which originally good water is spoiled by infiltration from the sea. Let us suppose rain falling, for instance, on a coral island; if the rainfall be sufficient, the porous soil will soon become saturated with fresh water which will sink down and displace infiltrated sea water. In course of time the saline deposits will decrease to a minimum, and the island will retain in its porous subsoil a head of water which, so long as it is higher than the sea water, will effectually keep this out. As a matter of fact, all seaside places in which the level of the subsoil water is higher than that of the sea are secure against infiltration of sea water. The greater the rainfall, and the greater the height of the retained water in the subsoil, the more effectual will be the washing out of any marine deposits in the subsoil. Where the land is of comparatively recent upheaval, where the rainfall is small, where the land is too low to keep up a steady outward pressure of subsoil water against the sea, the process of washing out is slow, and the water may be normally brackish. I would instance the whole eastern or Coromandel coast of India. There the rainfall is small, coming principally in bursts which flood the rivers, but do not penetrate the soil thoroughly. Consequently it is found that the water is frequently brackish, except where the well is in the neighbourhood of a watercourse. Long after the Indian watercourses, from the small nullah, or ravine of a storm-torrent, to the river half a mile broad, have dried up under the influence of the dry season, there remains an underground sheet of water in the interstices of the subsoil; this sheet of water presses down the valley and supplies any well which may be sunk within its influence. This water is generally free from salinity in proportion to the washing effect it has had in past times on the subsoil. There is, however, an exception. The moving sheet of water carries along with it a certain quantity of salts, and should it all be drawn to the surface and exhausted by the effect of prolonged drought, its salts are deposited in the soil. Next year's rains dissolve the salts and carry them further down the valley, hence the phenomenon of a diffused mass of salts migrating along the lands and either sterilising them or rendering the waters brackish during their sojourn. Where the position of the country is unfavourable to this washing-out process the brackishness may be persistent. This must not be confounded, as it is likely to be in seaside places, with infiltration of sea water.

Thus, the salts which cause more or less brackishness in the subsoil water may not be from original marine deposits in the soil; they may be deposits by rivers or torrents which have since taken another course or which have dried up. And it must be remembered that salts may not be marine in the ordinary sense. There is a perpetual circulation of salts between sea and land, and, though it is probable that the sea is becoming, in the present geological period at least, more and more saline, yet a great part of the millions of tons of salts swept every hour, nay every minute, into the sea is being continually restored to the land. A remarkable instance has recently come under my notice. I began some weeks ago an examination of the waters of Guernsey, where I was then stationed, and I was surprised to find that the purest subsoil water contained nearly eight parts in 100,000 of sodium chloride, out of a total of seventeen parts of mineral constituents left on evaporation. This water was from a well in which the water lies at about 230 ft. above the sea-level and 60 ft. from the surface; the well is about a quarter of a mile from the edge of the cliffs; its situation and surroundings (in an unmanured field, without any buildings within several hundred yards, and pumped by machinery) are such as to remove all suspicion of contamination. Yet, what would theory not say of a water containing 4·6 centigrammes per litre of chlorine and 1·1 centigramme of nitric acid? Its quality would be expressed in terms of London sewage. Other waters from wells of equal purity were found to contain 5·3 centigrammes of chlorine and 1·9 of nitric acid in the litre. The approximate constitution of the solids was as follows:—

	Centigrammes.
Alkaline chloride	8·7
Alkaline sulphate	4·0
Nitrates	2·3
Earthy silicates	4·5
Earthy carbonates	3·3
	22·8 per litre.

The hardness of the water was 9·6° (centesimal scale).

	Centigrammes per litre.
Ammonia, free	·002
Ammonia, albuminoid	·0056
Oxygen required by the permanganate process	·003

Whence could come these large proportions of marine salts, more than half of the solid constituents of the waters? The subsoil of Guernsey is gneiss, and the wells are cut in this rock. The source of the salts is to be found in the high salinity of the air saturated with marine vapours, and I have no doubt that the whole of the salts are air-borne. These salts are continually being returned to the sea by the streams which pour down every valley and trickle from every cliff, but they are restored to the island as fast as they are washed away.

I regret that my departure from Guernsey cut short these investigations of an interesting subject. I, however, ascertained another fact bearing on the present subject. Several wells supplying houses on the esplanade in the lower part of St. Peter's Port (for the whole island is dependent on wells and rain-water cisterns) were found to yield brackish water. In some cases there was obvious sewage contamination, but where this was not evidenced by the amount of ammonia, it was pleaded that marine infiltration might be the cause of

the salinity. I found, however, that several of the wells on the slope of open ground above this esplanade were equally, or nearly equally, saline and nitrous, and the circumstances pointed to a large cemetery and several streets of houses on a higher level as the sources of the salinity. As the drainage of the town is of comparatively recent date, it may be imagined that the subsoil of the thickly inhabited parts is considerably contaminated by sewage. The wells in contaminated ground usually yielded about 20 centigrammes of chlorides, 5 to 12 of sulphates, 8 to 14 of nitrates, out of a total of about 60 centigrammes of mineral solids per litre. The hardness ranged from 22 to 31 degrees centesimal (1° = 1 centigramme per litre of calcium carbonate).

Returning to my Indian experience, I may mention that on the low Coromandel coast, where there is a comparatively scanty rainfall, wells near the seashore are frequently found to contain brackish water, while elsewhere conditions more favourable to washing out of salinity from the soil are accompanied by freedom from salinity, even though the wells be in very porous soil, and very near to the seashore. Thus on the western, or Malabar coast, the heavy rainfall has long ago washed all salinity out of the porous soil; wells near the shore, and dug down to the sea level (as evidenced by the sand at the bottom and the general level) yield water remarkably free from any salinity except that due to airborne chlorides. The reason is, as I have said, that in every place where the rainfall is sufficient to wash the soil free of any original marine deposits, it will exercise a pressure sufficient to prevent all infiltration of sea water. Therefore, whenever the level of the subsoil water is above that of the sea, any salinity not due to sewage contamination must be ascribed to marine deposits or airborne marine salts. Infiltration of sea water could only occur where the subsoil water was lowered by continuous draught. Could it, however, be produced by the pressure of high tides? I cannot answer the question positively, but I would venture to say that the fluctuating level of the sea could scarcely have effect at any considerable distance from high-water mark, and that high tides would only press back the water which low tides had drawn to the shore. The physical effect of the sea on the subsoil water of seaside places is then the same as that of other sheets of water, lakes, ponds, or rivers. Everywhere the level of the subsoil water is not below that of the sheet of water towards which it tends to flow. Apparent exceptions to this rule may occur where irregular cropping up of impervious strata dams the slope; but the rule here holds good as regards the underground sheet of water thus dammed up, though it may be a small supply, and soon exhausted. Where the sheet of water is the sea, the subsoil water can always be reached at a depth less than that of sea level, and less in proportion to the distance from the shore. And unless the subsoil water be exhausted by continuous heavy draught, in a well not far from the sea and sunk in very porous soil affected by tides, I do not think that infiltration of sea water can occur.

Palace-gardens-terrace, W.

IMPACTION IN THE LARYNX OF A FRAGMENT OF A BREAKFAST CUP.

TRACHEOTOMY; ARTIFICIAL RESPIRATION; RECOVERY.

BY HENRY W. FREEMAN, F.R.C.S.I.,
SURGEON TO THE ROYAL UNITED HOSPITAL, BATH.

A LITTLE boy, aged seven, when eating his breakfast, which consisted of bread and milk, broke with his spoon a triangular piece of china out of the rim of the breakfast cup. It fell unnoticed into the cup, and was inadvertently swallowed with the soaked morsels of bread. Choking followed, and, sending for me immediately, I found the child suffering from frightful laryngeal spasm, stridor, spasmodic cough, and threatened asphyxia. I had no doubt the piece of china corresponding to the gap in the cup was lodged in the larynx. No time was lost in inverting the body and striking the back sharply, but the foreign body could not be moved. It could not be felt with the finger or by the aid of curved forceps. Tracheotomy was decided on, and sending for the nearest medical man, the late Mr. Biggs, we proceeded to give chloroform. Half a drachm was first given, and for three or four minutes the anæsthetic was well taken. On administering a second half drachm respiration suddenly ceased, and the radial pulse disappeared. The trachea was opened immediately below the cricoid cartilage, and a double tube introduced. There was no intra-tracheal hæmorrhage. Silvester's mode of artificial respiration was then resorted to, alternating with Nélaton's mode of inversion, and after twenty minutes' steady perseverance, respiration was pretty well re-established, and the radial pulse had returned. The child was then wrapped in blankets, put to bed, and the steam spray kept going continuously. It was not deemed advisable to attempt for the moment any further mechanical interference. The foreign body, however, still remained in the larynx. Early on the following morning, having procured a piece of stiff copper wire, we bent half an inch of the end to a right angle, and withdrawing the tracheotomy tube, taking care to keep the section open with dressing forceps, the wire was introduced into the tracheal opening, and pushed steadily upwards until the chink of the china was heard, and, getting the bent portion at right angles to the foreign body, it was soon dislodged into the mouth and removed. The fragment removed measured seven-eighths of an inch in its longest diameter, was triangular in shape, corresponding to, and fitting, the gap in the cup. The boy made a good recovery.

Bath.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GREAT NORTHERN HOSPITAL.

A CASE OF LEFT POPLITEAL ANEURISM OCCURRING ABOUT FIFTEEN MONTHS AFTER THE CURE OF AN ANEURISM OF THE RIGHT FEMORAL; COMPRESSION OF FEMORAL WITH LIGATURE OF OX AORTA; CURE; REMARKS.

(Under the care of Mr. W. SPENCER WATSON.)

FOR the report of the following case we are indebted to Mr. Ashwell, house-surgeon.

Philip E——, aged thirty-five, with good family history, was admitted on June 15th, 1883. Previously he had had slight attacks of subacute rheumatism. He had not had syphilis, but gonorrhœa twice; had been used to taking a good deal of beer and spirits. In the early part of the year 1882 he was in this hospital for aneurism of the right femoral artery in Hunter's canal. The artery was tied in Scarpa's triangle with the ox aorta, and the wound healed in ten days, with complete cure of the aneurism.[1] About a month before the present admission he first noticed beating in the left popliteal space. He took no notice of it for fourteen days, when it began to be painful, and the leg began to swell. The swelling was gradually increasing in size up to his admission.

On admission, patient was a fairly nourished man, with dark hair; no cough; heart sounds normal; pulse regular, 68; slight rachitic curvature of tibiæ. There was an expansile pulsating swelling in the left popliteal space, larger on the inner than on the outer side, and movable on the bone. There was a bruit to be heard over the tumour, and pressure on the femoral artery above completely stopped pulsation; there was a good deal of swelling and œdema of the leg. The measurement over the most prominent part of the tumour was 14½ inches. On the 18th pressure by means of two tourniquets was tried, but the patient was not able to bear the instrument more than five minutes at a time. On the 20th the femoral artery was tied in Scarpa's triangle, the ox aorta being again used as a ligature. The spray was used when the operation was half over and the wound dressed antiseptically; pulsation completely stopped in tumour. At 5.45 the patient had one quarter of a grain of morphia subcutaneously; at 11.30 also one-sixth of a grain. Temperature 99·8°.—21st: Very fair night. No sickness after operation. Good deal of pain in the leg; the leg wrapped in wool, toes rather cold. Morning tempera-

[1] Vide Report in THE LANCET, June 10th, 1882.

ture 99·6°; evening temperature 99·8°.—22nd: Doing well. No pain. Morning temperature 99·6°; evening temperature 100·2°.—23rd: Bowels well opened. To have meat. Morning temperature 98·4°.—27th: Dressed for the first time and stitches removed. The wound healed by primary union. The temperature has not once risen to 100°.

July 24th.—Has remained in bed. The tumour very much decreased in size (13½ inches). Appears quite well in every way.

September 4th.—The induration in the site of the aneurism is diminished to the size of a bantam's egg. The man complains of no pain but is in feeble health.

Remarks.—In the above case a second opportunity was afforded for testing the principle of elastic ligature compression. It has again succeeded. The ox aorta ligature, a piece of which was kindly placed at Mr. Watson's disposal for the purpose, was used simply to close the artery, not to cut through its inner coats, sufficient force only being used to cut off the blood-supply by compression. Nothing has been seen of the ligature. Mr. Watson considers this method safer than the usual method, as being less liable to be followed by secondary hæmorrhage. Even if the knot slips and the blood current is re-established at too early a period (an accident which is not known to have occurred, though it has been predicted), the patient is in no worse a position than before; whereas the occurrence of secondary hæmorrhage places his life or his limb in extreme peril. A noteworthy feature in the case is the occurrence of aneurism on both sides. Granting a predisposition to aneurism in both femorals, it is possible that the increased strain thrown on the opposite limb after the cure of the first aneurism may have precipitated the formation of the second. There was nothing in the heart sounds nor in the character of the radials, nor in the general aspect of the patient, that indicated general atheromatous disease. For the first three or four weeks after the operation, fluctuation over the site of the tumour, but superficial to it, was distinctly felt. This suggests the possibility that the sac may have ruptured. It was therefore quite time to resort to operation, and any further delay might have necessitated still severer measures.

BRISTOL ROYAL INFIRMARY.

CASES ILLUSTRATING SOME OF THE LESIONS INCLUDED UNDER THE TERM "SPINAL MENINGITIS"; NECROPSIES; REMARKS.

(Under the care of Dr. E. LONG FOX.)

CASE 1. *Visceral Syphilis; Paraplegia; Death.*—James K—— had primary syphilis five years ago. He was admitted in August last with loss of bone on the sternum and eighth left rib. He became paraplegic and delirious and died.

Necropsy.—Cranium and its contents healthy. Spinal cord: Vertebræ healthy, membranes healthy, except that opposite the first lumbar vertebra there was a small deposit of pus outside the dura mater, anteriorly. Softening of all dorsal portion of cord, especially of posterior columns. Syphilitic destruction of middle and upper section of sternum. Syphilitic node on eighth left rib. Deposit of cheesy material over fifth intercostal space, near the cartilage. Syphilitic deposits of liver, spleen, and kidneys.

In this case the presence of pus outside the cord was probably secondary to the syphilitic disease of the sternum. The occurrence of pus between the dura mater spinalis and the vertebræ is not very common, and as a result of primary inflammation of the dura mater itself is very rare. It is usually found as a result of disease of the vertebræ, as in the following case, under Dr. Waldo's care, in the infirmary some time ago.

CASE 2. *Paraplegia; Death.*—A woman, aged thirty-two. Complete paraplegia for several months. No perception of touch to the lower limbs; but the patient often complained of great pain in them. Hardly a trace of reflex action. In every respect the left leg was rather worse than the right. Paralysis of sphincters. Deep central and several lateral symmetrical bedsores. Great emaciation. Legs œdematous.

Necropsy.—Spinal cord: Palpable swelling of cord from eighth dorsal vertebra to cauda equina; posterior dura mater spinalis somewhat thickened over this space; anterior dura mater spinal is covered with a layer of pus between it and the bone over the same region. On section, it was found thickened to about one-sixth of an inch, very adherent to the spinal cord, and very vascular. The cord itself from the eighth to the eleventh dorsal vertebræ was creamy throughout its whole thickness. Below this point the nervous substance had almost entirely vanished, the whole of the anterior and lateral columns being composed of indurated and proliferated connective tissue, very dense, and hard. Central grey matter and posterior columns softened. Cauda equina in a state of sphacelus, the nerve-tubes breaking down on being touched. The origin of the lesion was the body of the tenth dorsal vertebra, which was in a state of necrosis, and was picked out in pieces by means of forceps. The rest of the bodies were healthy. Dr. Spencer's unique case of diffuse pachymeningitis spinalis externa, without any disease of vertebræ, was recorded in THE LANCET, 1879, vol. i., p. 836.

The great diminution of the reflexes is one of the chief diagnostic marks in external pachymeningitis. The differentiation between internal pachymeningitis and leptomeningitis is not always easy, the two conditions are so frequently commingled in the same case. In the former the pain on vertebral movement is generally less than in leptomeningitis, whilst pain on vertebral pressure is greater. Although both conditions constantly lead to compression of the cord, this sequence occurs much more rapidly in inflammation of the soft membranes than in lesion of the dura mater. Internal pachymeningitis may occur from strain, the first consequence of which is a small hæmorrhage. The inflammation of the dura mater may be the direct consequence of this, or a small sarcoma may result, with a certain amount of meningeal inflammation around it. Of course, the original hæmorrhage in such instances is to be distinguished from that in pachymeningitis hæmorrhagica, such as is sometimes met with in cerebro-spinal meningitis and in general paralysis of the insane, where the inflammatory exudation is primary, the hæmorrhage secondary.

CASE 3. *Abscesses in Gluteal Region; Imperfect Paraplegia.*—This case is an example of an affection of the spinal membranes from an uncommon cause. Many of the symptoms are myelitic. Mrs. C. B——, aged thirty-nine, has had abscesses affecting both sciatic nerves; walks very imperfectly. Her first confinement occurred five years ago; she was then very ill, and had two deep abscesses, one very deep, just over the right hip; the other in the left gluteal region, close to the middle line. She has never walked well since that time. Now her memory is poor; she is irritable, listless, does nothing. Eyesight bad, especially of left eye; cannot read. Upper extremities normal. In the legs sensation is dulled. Charcot's æsthesiometer to 5° she feels at one point, and in the right leg she only feels this on considerable pressure. Sphincters unaffected, except that during her last pregnancy she sometimes could not hold her water, and even now the desire to micturate must be at once attended to. She can raise her legs in bed tolerably well, but not freely; can bend her knees, but cannot lift her legs from the bed more than a foot. She often falls in walking, partly from deficient sight, partly from nervousness, partly from the giving way of her legs; walks very badly. If held by both hands she puts out her feet stiffly and imperfectly for about twelve inches. If she goes by herself she clings to furniture with both hands, and only takes a very short step. Limbs well nourished. Electro-motility lost on lower part of both legs, and in feet; electro-sensibility lessened there. No syphilitic history. Some motor improvement took place. Pain may not be felt on pressure at the spinous processes, but it may be a prominent symptom on pressure on each side of the spine. This was seen also in the following case.

CASE 4. *Wrench of Spine; Difficulty in Walking; Pain on Lateral Pressure of Spine.*—Miss B——, aged fifty-five. Twenty years ago she was laid up for eighteen months in India after a wrench to the spine. Was able to do a long day's walking after that. Some four or five years ago she went to Bath, with a good deal of pain in the lower part of the back and of the left side. Got better under counter-irritation. Last November she fell down on her back, and since then has been worse. Walks slowly because movement hurts her back and abdomen. No motor or sensory paralysis; no tenderness over the spinous processes, but she shrinks from lateral pressure on the spine at the exit of the nerves on each side. This is specially the case on the right side from the seventh dorsal to the second lumbar vertebræ. Eyesight fair. No loss of coördination.

The symptoms vary according to the portion of the cord affected, both horizontally and vertically. This is especially seen in those cases of pachymeningitis hypertrophica cervicalis,

to which Charcot and others have drawn attention. Thus in Case 5 the prominent symptom must have depended on pressure on the lateral columns by meningeal inflammation, or on sclerosis of these columns as a later consequence of this same compression. Most usually compressive myelitis results in creamy softening of the cord, but in very slow cases a certain amount of sclerosis is not unfrequently met with.

CASE 5. *Injury of Spine; Violent Convulsions in Lower Limbs; Recovery.*—William L——, aged forty-eight; has been ailing for two years after lifting a heavy weight. He was at first in the surgical wards of the infirmary, and an issue was then inserted into his back. At that time he had paralysis of the sphincters, but he regained power in these muscles after a prolonged use of the Bath waters. Now, at times he seems to be in perfect health, except that he is unable to stoop; but several times a day, on sudden movement, as occurred during the medical examination after percussion of the last dorsal and first lumbar vertebræ, the most violent and rapid convulsions occur in the lower extremities. These convulsive attacks occur about three times a day without loss of consciousness. There are pains in the above-named vertebræ, extending round the body and passing down the front of the legs. Bowels confined; urine healthy. He walks fairly, but cannot well hold himself up. As he improved under counter-irritation and iodide of potassium, the convulsions occurred less frequently, but could be induced if the body were forcibly bent backward. Recovery was complete.

In CASE 6 the motor phenomena took the form of jactitation.—William T——, aged fifty-six; has been ailing eight months, at first with so-called rheumatic pains. Five weeks ago he came as an out-patient complaining of pain down the arms. Three weeks ago he began to have sudden startings, quite involuntary, several times a minute. This motion can be checked for a short time by fixing the left foot firmly against a solid object. The jactitation is generally confined to the left leg, but sometimes the right is also affected. No paralysis of either leg. Sphincters unaffected. About three months ago he was in the infirmary in consequence of having ricked his back as he was lifting a half hundredweight of goods. The pain then was in the left lumbar region. This region is still tender; and percussion there increases the jactitation. As long as he is quiet the jactitation is nearly absent; but it was much increased by the use of a water-pillow.

In the following case some sympathetic phenomena were present. Considering the close connexion of the sympathetic with the spinal cord—so close, indeed, that many physiologists seem unable to conceive any independent action of the sympathetic apart from the spinal cord,—it is rather remarkable how seldom any sympathetic phenomena seem to result from meningeal inflammation, even in cases in which pressure on the spinal nerves is most marked. This peculiarity goes far to prove that the cervical ganglion of the sympathetic may, under certain circumstances of cord pressure, act as independent nerve-centres.

CASE 7. *Prolonged Exertion; Dyspnœa from Pressure on Second and Third Dorsal Vertebræ.*—Frank B——, aged sixteen, a fortnight ago played cricket, and had a prolonged and fatiguing innings. Since then he has palpitation on slight exertion, and dyspnœa. There was tenderness over the second and third dorsal vertebræ, and pressure there caused dyspnœa. There was no paralysis. Four months after the beginning of his ailment he did not lift the right leg so well as the left, and he suffers from palpitation on slight exertion. Under absence from a public school, counter-irritation over the spine, strychnine, and cod-liver oil, he gradually recovered. The next case was seen early, and therefore the importance of tremor on voluntary movement was not overrated. It was doubtless a phenomenon of shock, or rather of imperfect circulation in the antero-lateral columns.

CASE 8. *Blow on First Dorsal Vertebra; Tremor in Upper and Lower Extremities.*—Miss W——. A fortnight ago a ladder fell edgewise on her neck, and struck her about the first dorsal vertebra, more to the right side than the left. She was not stunned, and after a time walked across the road to her lodging with help. Was in pain from the blow for two days, but saw no doctor until the third day. Then tremor of hands and legs began, especially on voluntary movement or on any excitement. There was difficulty in moving the legs, because such movement caused pain in the lumbar region. When seen two weeks after the accident, the tremor in the limbs was not constant, but occurred only if she was moved into an upright position. There was a little paresis of the whole of the right leg, and a little dulness of sensation; sensation good elsewhere. Moving either leg caused pain over the lumbar bulb. Reflexes good, but not intensified. On the previous day she passed water involuntarily, but had not done so before. Slight girdle pain round the waist, and another round the level of the third rib. Passive congestion of bases of both lungs. Diaphragm acts well. No atrophy of muscles. Spinal tenderness all down the spine, especially over the cervical and lumbar bulb. She feels very nervous. A month later the urine was passed only once a day. Bowels very confined. If she was exhausted, there was more numbness in the right leg, and decided hyperæsthesia of the body, except along the spine, where she could not feel blistering fluid. Right arm a little paretic. She recovered completely in twelve months. In this case there was doubtless a rupture of a small vessel of the pia mater a little below the cervical bulb; the blood had dripped down to the lumbar bulb and set up slight meningitis there; and the exudation, *plus* the hæmorrhage, caused pressure of the right lateral column. In the next case the intensity and rapidity of the morbid phenomena, with the considerable amount of recovery, point to rapid but temporary compression from meningeal exudation.

CASE 9. *Fall on Sacrum; subsequent Paraplegia.*—Master B——, aged thirteen. Ten days ago he fell on the sacrum. At first he suffered from dragging of the right leg, then from weakness of both. Sensation good until two days ago. Now he has complete paralysis of both legs. Four days ago, retention of urine for two days; now complete incontinence. Sensation quite absent up to a point corresponding to eighth and ninth dorsal vertebræ. Girdle sensation at this point. Slight plantar reflex in both feet; all other reflexes absent. He often sighs deeply, apparently to make up for deficient respiration, the lower ribs not being well moved; arms healthy; no paræsthesia above eighth dorsal vertebra; intellect clear; no trophic disturbance as yet. A week ago complained of acute pain over the course of three or four ribs on the right side. No tenderness of any vertebræ. The complete paralysis, motor and sensory, of the lower limbs, and the respiratory difficulty, evidenced a grave prognosis, but he recovered sufficiently to go to school regularly, at first with the help of crutches.

CASE 10. *Strain; Paresis of Motion in Legs; Recovery.*—Miss Mary E——, aged fifteen, had strained herself at a gymnasium. She had much pain in the legs, especially in the right, followed by numbness and great paresis of motion. Passed her water under her at first. Under counter-irritation, rest, mercury, and iodide of potassium she recovered in three months.

CASE 11. *Blow on Cervico-dorsal Spine; Pain on Movement of Limbs; Recovery.*—The phenomena seemed to depend on the combined action of strain and cold. General F——, aged fifty-nine. Three years ago, in India, a pony fell on him, cut off his right ear, and injured a spot about the ninth cervical and first dorsal vertebræ. There was also fracture of the sixth and seventh ribs of the left side. Was unable then to move the limbs without pain. He recovered after having had eighty leeches applied to the spine. Since then he has felt nothing, except occasionally, on strong exertion, as in carpentering. In the early part of March, 1882, he was examining Clifton Suspension Bridge for an hour in a gale of wind, looking up most of the time. Since then he cannot turn his head. Is very tender about the seventh cervical vertebra. Has great pain in arms and leg if he moves. Pain is most intense in the arms if he moves them behind him, or on pronation or supination of the arms. Pain also in the legs, and difficulty in rising from a chair. Numbness in right ulnar and right median distribution, but no true anæsthesia. No paralysis of limbs, or of sphincters; knee-jerk normal; no girdle pain; no ocular disturbances; no headache; general health good; urine healthy; surface reflexes normal. The diagnosis was "very localised spinal meningitis pressing on the posterior roots of certain nerves; so far, no pressure on cord." Treatment: Leeches to spine, followed by blisters; solution of the bichloride of mercury, iodide of potassium, and solution of cinchona; fatty food. Rest, not in bed, but in a movable chair supporting the spine. In nine months he was much improved.

The origin of the symptoms in CASE 12 was prolonged immersion in a stream. Mrs. Y——, aged forty-six, was upset from a carriage into a stream, and, though not injured, could not be got out for half an hour. Walks badly, because any attempt to move brought on so much pain in the legs. No

real paralysis; no anæsthesia; no incoördination. Knee jerk normal. She recovered in three months. In meningeal inflammation, the result of primary lesion of the cord itself, the symptoms generally take a wholly different course.

WORCESTER GENERAL INFIRMARY.

CASE OF ACUTE RHEUMATISM; SALICYLATE OF SODA; CURE.

(Under the care of Dr. SWETE.)

FOR the following notes we are indebted to Mr. M. B. Shirley, house-surgeon:—

Henry P——, aged thirty-three, was admitted Aug. 4th, suffering from rheumatic pains in both wrists and ankles, which were swollen. Temperature 102·2°, characteristic sweat and intense thirst. Ordered salicylate of soda, twenty grains every two hours. This was continued until the evening of the 6th, when the temperature had risen to 104°. He was then ordered salicylate of quinine, ten grains every two hours. The temperature went down next morning, but rose again on the evening of the 8th to 102·2°. He was then ordered salicin, forty grains every hour; this had little or no effect. The soda was then returned to, and he took it until the 13th. The temperature still failed to come down to normal, so he was given twenty grains of bicarbonate of potash with tincture of colchicum every four hours. This was continued until the evening of the 18th, when the temperature had again risen to 101·2°. The salicylate of soda was again given, this time with a favourable result. On Sept. 1st the temperature was normal night and morning, and the patient was quite free from pain.

Remarks.—This case was absolutely without any complication whatever, and after the first few days the pain and swelling were only slight. The patient was kept strictly on milk diet, with soda water *ad libitum*. There was no affection of the heart in any way.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lympho-sarcoma of Alimentary Tract.—Tumour of Bladder.—Congenital Growth in the Orbit.—Tumours of the Brain.—Gastritis in a Bear.—Sebaceous Cyst from Finger.—Congenital Malformation of Heart.—Gumma of Dura Mater and Syringo-myelus.—Rickets in the Monkey.

THE first meeting of the present session of this Society was held on Tuesday, October 16th, J. Whitaker Hulke, Esq., F.R.C.S., F.R.S., President, in the chair. The President said that he had great pleasure in presenting to the Society the thirty-fourth volume of its Transactions.

Dr. CARRINGTON exhibited a number of specimens illustrating a malignant form of Hodgkin's Disease. The patient, a woman aged fifty-five, had died in Guy's Hospital, under the care of Dr. Goodhart. She stated that she had first noted swelling of the glands on the left side of the neck in June, 1882; in August following the legs and abdomen became swollen. When admitted, on Feb. 7th, 1883, she was very anæmic and emaciated, and the subcutaneous tissues were generally œdematous; the cervical, submaxillary, axillary, and inguinal glands were enlarged; the spleen was very large, reaching as low as the crista ilii. An examination of the blood showed that there were about 4,720,000 red corpuscles to the cubic millimetre, and about 4·3 white corpuscles to every 1000 red discs. A week after her admission she was seized with palpitation; there was no fever, but the urine was found to contain a trace of albumen, and the patient died the same day. At the post-mortem examination the mesenteric glands were all enormously enlarged. The stomach was studded on its mucous aspect with numerous cream-like flattened tumours. Below the duodenum the small intestine began to be diseased. The valvulæ conniventes first became firmer and more swollen than usual, then polypoid and creamy lower down. The solitary glands and Peyer's patches were enormously swollen. The spleen was greatly enlarged, but of natural shape, so that the section seemed to exhibit large Malpighian bodies throughout. The microscope showed the growths to be of lymphomatous structure. Dr. Carrington had been able to find only four similar cases recorded in the Transactions of the Society.—Mr. HULKE considered the case to be of great interest; he had never seen a similar one.—Dr. PYE-SMITH referred to a case of this kind recorded by Dr. Behier about twenty years ago, which was, he believed, the earliest published case; it was an instance in which the lymphatic tissues of the intestines were enormously overgrown.—Dr. SIDNEY COUPLAND observed that Cruveilhier had figured an instance of this disease in his Atlas; this was probably the earliest case of which any note remained.

Dr. HADDEN read notes of a case of Scirrhus of the Bladder. The patient was a man aged sixty-three, who was under the care of Sir Wm. Mac Cormac at St. Thomas's Hospital. The prominent symptoms which were noticed three months before admission were hæmaturia, severe pain, and dysuria. A large firm mass was felt per rectum in the position of the prostate. After death the right kidney was found to be very small. It contained a few cysts and some abscesses. Its outer surface was irregular and tuberculated. There was a soft warty-looking growth, made up of granulation tissue, attached to the mucous membrane of the bladder on the right side, just beyond the neck. The anterior wall of the bladder was much thickened, white, and very hard. The prostate was not involved. There were two or three large hard glands behind the bladder, but no other secondary deposits. The growth was of "scirrhous" nature. Although Sir Henry Thompson believes that this tumour is the most common form after villous growths, yet only two cases have been recorded in the Transactions, one by Dr. Bastian, the other by Mr. Butlin.

Mr. GEO. LAWSON related the history of a case in which he had excised the eye of a child only two days old, on account of a congenital tumour of the orbit, which had completely extruded the eye from between the lids. The little patient was taken to the Royal London Ophthalmic Hospital in May, 1882, suffering from complete exophthalmos, which was congenital, and evidently due to an orbital tumour. Mr. Lawson removed the eye, and for a time the child did well. The child lived until the middle of the August following, and had been in fairly good health until within two days of its death, when convulsions came on, which were followed by coma. The post-mortem and microscopical examinations were made by Mr. Mills, the curator of the museum. The following is an abstract of his report:—A large tumour was found projecting from and filling up the right orbit. On opening the skull, the upper surface of the brain and its membranes were quite healthy. On the under surface there was a distinct impression in the right middle lobe, produced by the projection of several cysts from the sphenoid bone. There was much marked basic meningitis, confined chiefly to the right side. The tumour seemed to have originated in the body of the sphenoid bone, and to have grown forwards, filling up the cavity of the orbit, and pushing the eye in front of it. The tumour was pretty solid, but contained numerous cysts in its substance. Under the microscope the tumour was found to consist of several varieties of tissue in different stages of development. The most noticeable were patches of hyaline cartilage of a spherical or oblong shape; these were often surrounded by a zone of spindle cells, with a distinct gradation from cartilage cells. Numerous cysts were scattered through the tumour, of all sizes. The walls of the cyst were usually lined by pavement epithelium. In places small cysts were seen to be projecting from the walls of the larger ones. The more solid part of the tumour consisted of masses of round cells like embryonic tissue, spindle cells, and more fully developed fibrous tissue. There was evidence of formation of glandular structure at several spots. The microscopical examination showed that the tumour was evidently one of embryonic origin, with an attempt to develop into the lower forms of connective tissue and gland structure.—The PRESIDENT said that Virchow had described a somewhat similar case. In that case also the tumour had originated in the sphenoid bone, and was in large part cystic in structure.

MR. KESTEVEN read notes of a case of Tumours of the Brain. About two years before the patient's death she had had a melanotic tumour removed from the thigh by Mr. Pearce Gould, she being then a patient of Dr. Glover's. About a year before death pain in the back and insidious paralysis of the left leg were noted. Six months before death she had a kind of "stroke,' after which she was in a "tranced state" and almost speechless. Sensation was

abolished, even that of the cornea. The most remarkable feature was, however, the state of rigidity in which the legs were contorted and intertwined; and the thumbs were turned into the palms. At the autopsy the meninges were found to be healthy, but on removing the dura mater a dark patch, measuring an inch and a half in the antero-posterior diameter and an inch in the transverse, was at once discovered. It was situate in and occupied the posterior two-thirds of the left superior frontal convolution, extending posteriorly to the fissure of Rolando. Below, and external to this, were seen two similar masses, smaller in bulk, and situated, the one in the middle frontal convolution, and the other in the inferior frontal. There were also similar appearances in the superior parietal lobule and in the superior occipital convolution. All these were on the left side. The first tumour mentioned extended an inch in depth inwards from the surface. A tumour was also seen in the right centrum ovale beneath the superior frontal convolution. Many nodules were found on the base of the brain: one occupied the position of the orbital surface of the left frontal lobe; another was seen about one inch below the left fissure of Sylvius. A large mass was also seen to grow from between the pons and left temporo-sphenoidal lobe; the posterior communicating and posterior cerebral arteries were embedded in this mass. Two nodules were detected in the right occipital lobe. Eleven tumours in all were recorded. Microscopical examination exhibited the structure of round-celled melanotic sarcoma. The bearing of the case on the subject of the localisation of cerebral functions was discussed.

Mr. JONATHAN HUTCHINSON, jun., narrated a case of Acute Gastro-enteritis in a Bear. The animal died, after an illness of only about a day, in February, 1883. The stomach and upper part of the intestines were acutely inflamed. The rest of the intestines was healthy. There was no food, but much exudation, in the stomach and neighbouring part of the bowel. No torulæ or micro-organisms were found in it, but immense quantities of round cells and fibrin, with altered blood. The uterus, bladder, and trachea were in a state of acute catarrh. The other viscera were healthy. The wind was in the east at the time, and the probability seems to be that the disease was purely catarrhal. An interesting point was that there was no fur on the tongue.

Mr. POLAND showed a Cyst removed from the flexor aspect of the ring finger of a man aged fifty-nine. The cyst had been noticed for about four years, and had become inconvenient owing to its increase in size; it was lined with layers of epidermoid cells, but there was no distinct sac; he regarded it as sebaceous.—Mr. GODLEE had met with three cysts of the kind on the palmar aspect of the fingers; one measured an inch long and half an inch broad. In the third case, which had occurred recently, he had noticed a small black point, such as was commonly seen in sebaceous tumours. He, however, failed to see how the occurrence of a sebaceous cyst in such a situation could be explained.—Dr. SAVAGE said that twenty-three years ago Mr. Bryant had removed a cyst from his forefinger, which was undoubtedly sebaceous.—Mr. HULKE said that there were several cases on record of sebaceous cysts in the anterior chamber of the eye, which had developed after penetrating wounds of the cornea involving the iris. In these cases it seemed probable that at the time of the wound some sebaceous gland had been transplanted on to the iris. This theory might explain the occurrence also of a sebaceous cyst on the flexor aspect of the finger.

Mr. HOWARD TOOTH exhibited a specimen which presented a rare kind of Congenital Malformation of the Heart. The pulmonary artery arose from the sinus of the right ventricle, and the aorta from the infundibulum; the foramen ovale was not quite closed, and the intra-ventricular septum was deficient at the base. The patient was a boy aged eight years, who died of enteric fever; cyanosis had been noticed for six years, and when admitted to St. Bartholomew's Hospital, under the care of Dr. Gee, there was, in addition to the symptoms of the enteric fever, a clubbing of the fingers and toes, a loud systolic murmur heard equally over the whole præcordia, and bulging of the chest to the left of the mesial line.

Dr. FREDERICK TAYLOR showed a case of Syringo-myelus, associated with syphilitic spinal meningitis and gumma of the spinal dura mater. The patient was a woman with undoubted evidence of syphilis, who had suffered from ill-developed left hemiplegia for three years, and from paraplegia with rigidity for one year previous to death. The spinal dura mater was very much thickened throughout the greater part of the cord, and at the level of the ninth dorsal vertebra it presented a gumma, which pressed upon the anterior surface of the cord, thereby distorting it considerably. At the same point the cord was softened, and secondary degeneration extended both upwards and downwards. Besides these changes, the cord contained a cavity which stretched nearly its whole length. The shape and lateral extent of this cavity varied at different levels. In the cervical region one section showed a cavity in each posterior cornu, the two being disconnected. There was no definite lining to the space, the wall of which merely showed the tissues of the cord in a rather dense state. This abnormal space had no connexion with the central canal. Dr. Taylor had shown a similar case at the Pathological Society four years ago, and others were recorded in German literature. A distinction must be drawn between hydro-myelus, in which the central canal is dilated, and syringo-myelus, which was the condition found in the present instance. Leyden had tried to show that the two varieties had everything else in common, and thought that syringo-myelus might arise from irregularity in the development of the central canal, especially at that stage when the canal had a T-shape, the posterior limb becoming constricted off to form the space found in syringo-myelus. Dr. Taylor was inclined to accept this explanation rather than attribute the cavity to the liquefaction of a tumour or inflammatory growth. The paraplegia was probably due to the pressure of the gumma, whilst the syringo-myelus was regarded as congenital and coincident.

Mr. SUTTON said that, having had during the past summer many excellent opportunities for inquiring into the clinical history of Rickets in Monkeys, he proposed to relate certain facts bearing on that disease. The selected specimens consisted of two weeper capuchins from Brazil and a spider monkey from South America, all of them resident in the Zoological Gardens. When a monkey becomes affected with rickets, the most prominent symptoms are diminished activity and paralysis of the lower limbs, so that the creature swings himself along, using the long arms as crutches. The upper extremities then bend from the weight. Gradually the animal becomes completely paraplegic, suffers from incontinence of urine and fæces; priapism is frequently observed. Death is most commonly caused by bronchitis or broncho-pneumonia. The disease advances very rapidly; in some of the more severe cases the disease runs its course in three or four months. The most interesting symptom is the paraplegia. Capuchins exhibit in an extreme degree all the characteristic signs of advanced rickets—beaded rib shafts, softened and curved bones, enlarged epiphyses and epiphysial cartilages, deformed pelves, &c. The skull of one specimen is remarkably eroded, perforated, and slightly thickened; on either side of the foramen magnum is a large tabetic patch. The shafts of the long bones present a very peculiar condition, for the compact tissue, instead of being arranged in the familiar concentric layers, is split into longitudinal lamellæ separated by tracts of richly cellular connective tissue, which is readily seen to be continuous with the deeper layers of the periosteum; the medullary cavities are filled with dark-red marrow. The epiphyses exhibit in the highest degree that condition to which Mr. Sutton has assigned the name "diffuse epiphysis." Further investigation has convinced him that the enlarged epiphyses met with in rickets are due to the ossific matter being deposited in a diffuse and irregular manner. In some he has counted as many as thirty in the epiphysis for the condyles of the femur. In the spider monkey the disease seems to have occurred in an older animal. The shafts of the long bones gave one the impression that new bone had been deposited in the compact tissue of a well-formed bone. The thorax was transversely deformed, due to the distension of the stomach and upward displacement of the diaphragm. The stomach was so dilated that it reached from the diaphragm to the symphysis pubis. All monkeys in whom this disease assumes severe proportions become paraplegic. He has found that this is due to gradual and slow compression of the spinal cord, the result of overgrowth encroaching upon and narrowing the spinal canal, not in one place, but general, so as to narrow the canal. Not only does the cord itself get nipped, but the nerves themselves are pinched, for the softened laminæ allow the intervertebral foramina to be encroached upon, due to the weight of the body. This condition explains the pain, paraplegia, incontinence, and priapism. This condition is best seen if a transverse section be made across the column, with the cord still *in situ*. In all the recorded cases of mollities ossium in man, pains, and in some para-

plegia, were the leading symptoms. In all the instances in which the disease has endured for any length of time, softening of the vertebral column has been recorded whenever that portion of the skeleton has been examined at the autopsy. Pain may be due to compression of cord and nerves. The spinal cord of the monkeys presented the usual degenerations which follow on compression, from whatever cause.—Dr. GOODHART asked Mr. Sutton whether he could state the age of the monkeys; it was important to know this, because the monkeys mentioned by Mr. Sutton in his earlier communications were probably all adults; if that were so, then this affection of monkeys was analogous to that disease known as "late rickets" in man, and it was doubtful whether this was rachitic in nature. He also inquired whether lardaceous disease had been observed.—Mr. SUTTON replied that there was no lardaceous disease, and said that it was extremely difficult to adjudge the age of the monkeys, as they were not born in the Zoological Gardens. The state of the epiphyses was the only guide, and this was by no means reliable.

Mr. A. Q. Silcock showed a card specimen of very extensive Ulceration of the Mucous Membrane of the lower part of the Colon, Sigmoid Flexure, and Rectum, so that only small islets of membrane with undermined edges remained. Dr. Frederick Taylor showed card specimens of Abscess of the Liver and of the Brain secondary to dysentery. Mr. Jonathan Hutchinson, jun., exhibited a card specimen of a portion of the Stomach of a Deer, which presented on its peritoneal aspect small inflammatory spots; the peritoneum also contained a small hydatid cyst, to which the spots were probably due.

CLINICAL SOCIETY OF LONDON.

Catheter Fever.—Abdominal Abscess in Children.—Cerebro-Spinal Sclerosis.

THE first meeting of the above Society was held on Friday, Oct. 12th, Sir Andrew Clark, Bart., President, in the chair. There was a good attendance of members, and two very interesting communications were read. The President congratulated the Society on reassembling at the beginning of another session. He hoped its work would result in the better treatment of disease. He asked from the surgical members of the Society information on one subject. In 1870 a man, who was otherwise in good health, consulted him for slight incontinence of urine. He consulted a specialist, who found his prostate enlarged and his bladder unable to empty itself, and advised him to use a catheter. Four days later he was taken ill; urine contained a little pus; pulse 120; temperature 100°. After two days the temperature rose higher, the pulse became more frequent, and in eight or nine days he died; the bladder was inflamed, and the kidneys were reported to be healthy. Since 1870 he had seen four or five such cases every year. He had not been able to gather sufficient information on this malady, which was not very uncommon. He was not alluding, of course, to the slight rigors after catheterism, but to a fever which generally ended fatally. The catheter had sometimes been tied in, and at others only passed occasionally.

Dr. GOODHART read notes of three Cases of Peritoneal Abscess in Children. The first was that of a girl, aged eleven years, who was said to have suffered from typhoid fever four months before she came under treatment. She was in bed for eight weeks, and in the seventh week had chicken-pox. Soon after this an abscess formed at the umbilicus and opened. She was admitted into the Evelina Hospital with a sinus discharging pus copiously at the umbilicus. She was placed under chloroform, and Mr. Howse made a thorough examination with a probe. This left no doubt, from the freedom with which it passed deeply in all directions, that the pus came from the peritoneal cavity; but, seeing that there was now no febrile disturbance, it was decided to keep the child in bed, feed her well, and watch the course of events. She steadily increased in weight, the discharge gradually diminished, and after three months had nearly ceased. She has now been for many months quite well. The second case was that of a boy, aged eleven, who had been quite well till shortly before admission. This illness, attributed to getting wet, began with rigors and vomiting. When admitted he was extremely ill, and the case was very obscure, but gradually a diffused abdominal dulness became localised in the hypogastrium and the abdominal wall began to bulge. After he had been in the hospital a month Mr. Howse made a small incision into what appeared to be an abscess. This was followed by the escape of a quantity of thin pus and some fetid gas. A long probe passed several inches in all directions into the peritoneal cavity. A quantity of fetid pus continued to discharge daily, but his condition did not improve, and the opening was therefore enlarged; but neither did this mend matters, and shortly after an explanation of its failure arose in the fact that the right pleura began to fill with fluid. The chest was incised and sixteen ounces of very fetid pus came away. Before long it became necessary to treat the left chest in the same way and with considerable relief to the child for a time. The lung, however, became consolidated, and he ultimately sank. The post-mortem examination showed that there had been a peritoneal abscess for which no cause could be discovered; that this had localised itself in each hypochondrium, and had thence perforated the pleura and on the one side set up a destructive pneumonia. There was no evidence of any tubercular disease. The viscera were lardaceous. The third case was a female child of five years. Her illness began six weeks before admission with inflammation of the bowels, and she was sent into the hospital for supposed retention of urine, the abdominal swelling resembling a distended bladder. But the temperature was raised. So at the end of a week an exploring syringe was introduced two inches below the umbilicus, and some thick, dirty, fetid pus was withdrawn. A free incision opened a cavity which appeared to be limited behind by the intestine covered by omentum. A drainage-tube was inserted for a few days, but the discharge soon diminished so much as to allow of its withdrawal, and at the end of six weeks she was well. Dr. Goodhart thought the cases worthy of record, first, because of their rarity, and, secondly, because the question of treatment is not an easy one to determine satisfactorily. On the one hand, there is the risk of the pus gravitating to the hypochondria, as actually happened in one case, if a free opening be not made; on the other, there is the difficulty of draining the cavity of the peritoneum if it be opened freely; though, on the whole, the cases point in the direction of the latter course as being the most advisable. It is probable that the surgeon might have no doubt upon the point. He would say that free drainage after abdominal operations presents few difficulties, and cases so treated are most successful. But it may be questioned whether the conditions after operation are quite parallel to those of pus in the peritoneum, and where there is a considerable tendency for the one collection to become distributed and to form several separate abscesses.—Sir A. CLARK recounted a case in which the opposite treatment resulted well. Some three months ago he was summoned to a dignitary of the Church who had limited peritonitis, and it was thought that there was a phlegmon at the bottom of it. Soon after he became very ill with collapse and wider peritonitis. When next seen a lump was evident in the abdomen. At his third visit the swelling lying above the umbilicus fluctuated. A relative, a doctor, proposed that a surgeon should now operate; this was overruled. Three days later a quantity of pus was discharged by the rectum, and he improved. Later on again he became worse, but again pus reappeared in the stools, and since then he has steadily improved. He thought there were some cases best left to nature, and not operated upon.—Mr. R. J. GODLEE had recently had a case in a child two years old, who, two months after whooping-cough, had a swelling in the abdomen, which burst and discharged first pus and then fæcal matter. This went on for many months. Mr. Godlee made a free opening; the child lived about ten days, and then died. There was a cavity in front of the intestines in which were several small openings communicating with them. The glands were not enlarged. He had now at University College Hospital a baby with a small fæcal fistula in the abdomen.—Dr. MAHOMED thought these cases were not very rare, and he believed they tended towards recovery, and if fatal they were found to be obscure in their origin. His first case was a man admitted to hospital very ill with severe peritonitis. The abdomen was explored by Mr. Pepper, and an abscess cavity was found, partially ruptured. The peritoneal toilet was made, and wound closed, but the man quickly died. At the autopsy two abscesses were found connected with two suppurating mesenteric glands. The next case was one under the care of Mr. Davies Colley. At the autopsy no tubercle was

found, but long-standing general peritonitis, with sinuses burrowing in varying directions, and openings between the bowel and abscess cavity. He quite recently had a boy, aged four, under his care with scarlet fever; he appeared to be recovering, when his temperature rose, and he became ill with peritonitis. He died on the sixth day. At the autopsy the intestines were thickly covered with creamy fluid, much matted, and collections of pus were found in the mesentery. The mesenteric glands were enlarged, but not suppurating. He suggested that in some cases irritating food or an organism excites acute inflammation in the mesenteric lymphatics, and that the disease tends towards recovery.—Mr. HOWARD MARSH had seen five or six of these cases. A little girl, aged six, had had some intestinal fever, possibly typhoid; this was followed by a fistula at the umbilicus. There was induration at the umbilicus, and the probe passed in here in all directions. The opening was widely dilated, and a large tube was placed in it. After about six weeks the pus was much less, and she improved considerably, and became fat and robust. He remembered, also, an infant, aged two, who had similar symptoms, with an abscess at the umbilicus, which was opened; and this case also did well. Two months ago he saw a man who, after a strain, felt a pain in the abdomen; a very large abscess formed, which was opened at the umbilicus, and afterwards another opening was made at the right hypochondrium. But the quantity of pus was very large. After a purgative he became suddenly very collapsed, as if from perforation; he, however, got better, and two months after his return home he died suddenly in ten hours from collapse, apparently from perforation. This was one of the dangers of these abscesses. He doubted whether these cases were really tubercular.—Mr. BARKER referred to a woman who, last April, was admitted to hospital with signs, it was thought, of a femoral hernia. He cut down upon the œdematous tumour, though in doubt as to its nature; he opened a very thickened sac and liberated a large quantity of pus. There was no intestine or omentum, and his finger passed freely through the femoral ring; he made a counter-opening through the abdominal wall, and drained it freely. The patient did very well. He thought all abscesses getting down towards the pelvis ought to be opened very early.—Dr. F. TAYLOR thought that where abscesses were recognised they should be treated as such and opened early. But as a physician he often saw cases of general peritonitis, which then became localised in abscesses. A young girl had general peritonitis, which subsided, but her temperature remained up for five or six weeks more, and then a tender spot formed in the lower part of the abdomen, which was incised; pus discharged and the case quite cleared up.—Dr. HABERSHON thought the cases related in the discussion were different from those described by Dr. Goodhart. They were, in fact, abscesses arising from peritonitis. In some cases there was a phlegmon in the parietes, which had a tendency to pass inwards and open in the peritoneum; and he had seen several such cases. In other cases there was a tendency to suppuration round the umbilicus in young children. Some abscesses, like Dr. Goodhart's, seem to arise from a blow.—Dr. EDIS had met with cases of encysted peritoneal abscess among women. A young woman got wet and cold just before her menstrual period. A week after she was admitted under Dr. Coupland. She was very febrile and ill; pulse scarcely perceptible; great vomiting, which became stercoraceous; tongue dry. There was pain in the abdomen; the uterus was normal. Just at the "roof of pelvis" an abscess was felt, and he suggested that this should be aspirated, and he drew off twenty ounces of pus, washed the cavity out with Condy's fluid, and the patient convalesced very rapidly. He thought such cases were often overlooked, and he believed it was always well to aspirate them. He also mentioned a case of abscess which burst into the rectum.—Dr. GOODHART said that his paper referred only to peritoneal abscess in children, and in quite young children, and in them such abscesses he thought were rare. He could only find casual reference to them in literature, and then following scarlatina. He was not wedded to immediate operation when fluid was detected beneath the abdominal wall.—Sir A. CLARK noted that four speakers had referred to cheesy deposits as non-tubercular, while all such deposits were generally said to be tubercular, a view which he did not share.

Dr. CHARLTON BASTIAN read an abstract of the notes of an anomalous case of Cerebro-Spinal Sclerosis. Joseph H—— had been under observation at University College Hospital from time to time since the year 1877. He died on March 24th, 1882, being then sixty-two years of age. There was a neurotic history; no syphilis. In August, 1868 (then aged forty-nine), he fell down a flight of stone steps. The patient dates his illness from eighteen months after the accident, when he began to complain (1) of dragging of the left foot in walking, (2) of tingling at the tips of left fingers, and (3) of deafness in left ear. After twelve months the first of these symptoms had disappeared; the other two remained. Four years and a half later his left leg again began to be weak. This was soon followed by weakness of the right arm and leg, and deafness on the right side. From August, 1876, he became gradually worse. He was first admitted into the hospital in October, 1877. He then suffered from paresis in all limbs; tingling in both hands; deafness and noises in both ears; giddiness; occasional headache, and pains in the eyeballs. There was no optic neuritis now or later on. There was no definite mental defect, but speech was indistinct and slow, with separate pronunciation of each syllable. Motor cranial nerves not distinctly affected. Deglutition natural. He stood and walked only with much difficulty. There was considerable rigidity of both legs, and some loss of power over the bladder. Knee-jerk present and equal on two sides. No tremors, either spontaneous or on movement, in either lower extremity. He left the hospital early in 1878, walking slightly better, but otherwise in much the same condition. Early in July, 1880, the patient was again admitted under Dr. Bastian's care. His intellect was unimpaired. Voice even more drawling and slow. Deglutition natural. The chief alterations in his condition were these:—Loss of all power of walking and of standing without assistance; loss even of power of raising feet from bed; loss of power over right hand (so that he could not feed himself or write with it as previously), with slightly increased force of grip on left side; much more paralysis of trunk muscles; the occurrence of the so-called "tache cérébrale" and of "factitious urticaria" after slight and more severe irritation respectively of skin; burning pains in trunk and limbs. The joints of the upper extremities were now rigid, and the muscles were wasted. The right leg was slightly flexed at the knee, the left extended at all joints—some rigidity on both sides. Muscles irritable to mechanical stimuli, and the interrupted current produced a tetanic condition of the muscles of the lower extremities to which it was applied. Both ankle-clonus and exaggeration of knee-jerk well marked, especially on the left side. There were still no spontaneous tremors or fibrillary twitchings in any parts, and no tremors on movement. Morning temperature often above, and evening temperature often below, the normal—99·5° and 97·5° respectively. About this time, too, the patient became more emotional, crying and laughing frequently and on slight provocation. He left the hospital at his own desire on Oct. 14th, 1880, but was again admitted under the author's care on Jan. 2nd, 1882. Still no intellectual impairment. Speech and deafness as before. Deglutition still unimpaired. Tongue protruded in straight line. No tremors. Right upper extremity rigidly flexed and motionless. On left side slight power of movement at all joints. No power of moving any part of either lower extremity. No control over fæces. Retention of urine, with dribbling and some cystitis. Breathing wholly diaphragmatic. Intercostals almost completely paralysed. Wide-spread numbness, with diminution of sensibility. Superficial reflexes all abolished. Knee-jerk exaggerated as before. Ankle-clonus easily obtained on left, absent on right side, though it returned two or three weeks later. Factitious urticaria still easily obtainable. During the next two months the patient suffered from frequent emotional disturbances—strange dreams of a terrifying nature, and many painful subjective sensations. On March 15th it was found that the patient had wasted considerably since the beginning of January. About this time his appetite failed, his tongue became thickly furred, and his temperature rose slightly. Fresh cystitis, with blood in the urine, appeared; and bronchitis, from which he had been suffering slightly for about a month, became gradually worse. He died asphyxiated on March 25th, having been quite unable to expectorate any mucus.—Autopsy, twenty hours after death. Brain: Meninges healthy; slight amount of subarachnoid serum. On the under surface of the pons two superficial grey patches were seen. One of them, a quarter of an inch in diameter, was situated near the middle line, contiguous to the extremity of the left anterior pyramid of the medulla, which was flatter than natural, and had a greyish tinge almost uniformly throughout its substance.

The right anterior pyramid on section was also found to show much grey degeneration, though less than its fellow. Sections through other parts of the medulla and through the pons showed many greyish-red patches of sclerosis, varying in diameter from a pea to a mustard seed. The root of the right auditory nerve for nearly half an inch was distinctly grey and semi-translucent. On the left side this was less marked in the superficial portion of the auditory root. The other cranial nerves were apparently healthy. The white substance of both cerebral hemispheres, but especially that of the posterior half of the left hemisphere, showed small grey areas here and there. In one section, through the region mentioned, about fifteen small patches were seen within a space of about two and a half square inches. None of them seemed to implicate the cortical grey matter. The lining membrane of the lateral ventricles was thickened, and very tough, and grey patches of discolouration were seen here and there on the surface of the thalami. On section similar patches were found through different parts of the interior of both thalami, but the corpora striata and the cerebellum were free from them. Spinal cord: Meninges healthy. Cord presenting no unnatural appearances externally. When sections were made the antero-lateral columns seemed to occupy an area relatively smaller than natural. No distinct changes of texture were recognisable by the naked eye on the cut surfaces in the eight or nine places in which sections were made. But after the cord had been immersed for some time in bichromate of ammonia, areas of degeneration were easily recognisable when fresh sections were made. A well-marked patch was seen, for instance, in the left cervical region, implicating a large portion of the lateral column, as well as a portion of the contiguous grey matter. Smaller patches also existed in this region, in the lateral column of the right side. In the lower dorsal region a distinct tract of sclerosis occupied the central portions of the posterior columns on each side of the middle line. In other portions of the dorsal, and in the lumbar regions, no very distinct patches of degeneration were seen with the naked eye, but on subsequent microscopical examination a diffuse overgrowth of connective tissue (not taking the form of limited patches or tracts) was seen in many parts of the lateral and of the posterior columns. The nerve cells, also, but especially in the lumbar region, were very notably atrophied. The central canal was enlarged throughout the whole of the cord, and densely packed with small round cells. The patches of degeneration in the medulla and other parts of the brain presented all the typical characters of areas of sclerosis in nerve tissue. Charcot, in his admirable account of "disseminated sclerosis," says:—"It rarely shows itself after thirty years. The age of forty seems, on the other hand, to be the outside limit to which patients attacked with disseminated sclerosis attain." It is worthy of note, therefore, that in the case of J. H—— the disease first showed itself when he was over fifty years of age, and that the patient lived to attain the age of sixty-two. In regard to etiology, the only points to attract attention are—first, some evidence of a neurotic tendency; and, secondly, the fall over a flight of steps eighteen months before the first distinct signs of the disease. The arrest of the disease for four and a half years, and the symmetry of its manifestation after this date, are interesting features. Although the patches of degeneration were so numerous in the medulla and in the pons, convulsions were absent from first to last. Again, it is worthy of note that the characteristic tremors on movement which so frequently constitute a marked feature in this disease were also absent from first to last. The early weakening of cerebral control over the bladder was probably due to the existence of an extreme amount of disease in both anterior pyramids. Although the sclerosis of the anterior pyramids, and especially of that on the left side, was so marked, yet nothing like a secondary degeneration existed in either lateral column of the cord. This is in harmony with what might have been expected, since it is well known that in these patches of sclerosis the axis-cylinders are usually not destroyed, although they are more or less pressed upon and damaged. It could not be expected, therefore, that the same results would follow from a patch of sclerosis, however well developed, involving the anterior pyramids, as might be looked for from a destructive lesion (e.g., a traumatic section or a complete softening). It seems probable that the hallucinations and abnormal sensory phenomena which occurred, especially during the last few months of life, were due to the late development of patches of sclerosis in the thalami as well as in the white substance of the posterior third of each cerebral hemisphere. The power of provoking in this case, over a period of several years, both a "tache cérébrale" and "factitious urticaria" are interesting facts in themselves, and especially from the point of view of the pathogenesis of this latter condition. In regard to diagnosis, it was pointed out that in the early stages of this patient's illness all the symptoms were to be accounted for by a disease of the medulla oblongata, and that the evidence even at that time was clearly against the existence of a tumour, and in favour of disseminated sclerosis involving this region in such a way as successively to abolish the functions of the auditory nerves without interfering with the portio dura, and again of impairing the power of articulation whilst it left that of deglutition intact. The subsequent progress of the case was felt to strengthen the diagnosis of disseminated sclerosis.—Sir A. CLARK asked if the vessels and kidneys were healthy.—Dr. BASTIAN replied that these organs were healthy.—Dr. ALTHAUS said that Dr. Bastian had anticipated all questions by his careful and complete description. He had lately seen a case of sclerosis with absence of tremor, which was very unusual. In this case there was loss of power, nystagmus, and atrophy of the optic nerves. One of the earliest symptoms of such cases was increase of mechanical irritability of muscles.—Dr. LONGHURST had traced such cases to long antecedent injury.—Dr. MONEY asked if the absence of implication of cerebellum and corpora striata was connected with the absence of tremor.—Dr. BASTIAN replied that there was no distinct nystagmus, but there was a jerking movement of the eyes. He was not disposed to accept Dr. Money's suggestion, but to explain the absence of tremor by the stress of the disease being at the first located in the anterior pyramids, which cut off the cerebral influence from the cord below. He thought injury had much to do with the development of chronic spinal disease.

The Society then adjourned.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

President's Address.—Tubercle (?) of Choroid.—Tumour of Right Eye, with Right Optic Atrophy and Left Hemiplegia. — Glaucoma. — Cases of Homonymous Hemianopia.

THIS Society met for the first time this session on the 11th inst., Mr. Jonathan Hutchinson, F.R.S., President, in the chair. A copy of the Society's Transactions, Vol. III., was laid on the table by the President.

Mr. HUTCHINSON said: "In Mr. Bowman you have enjoyed the services of a president of unequalled fitness and ability—of one, indeed, who had already conferred inestimable benefits on ophthalmic science. His acceptance of the office of president at once secured the success of our infant Society, and in his recent resignation of it we have sustained a very heavy loss—one which, I am well assured, it will be quite out of my power in any degree to make you forget. It is almost certain that the Society could not have afforded to continue in these rooms and develop itself in the proposed directions had it not been helped by an act of scientific beneficence not often surpassed. Having acquainted himself with the facts, and noting our position, our late president made an offer to the Council to himself undertake the cost of purchase of all fittings necessary for the museum and library, and further, to make a gift to the Society annually for twenty years of the sum of £50, in order to defray the expenses of rent of rooms. Need I say that the Council on your behalf thankfully accepted Mr. Bowman's munificent offer? And I have now the pleasure of informing you that we are, in all probability, rent free for twenty years, and shall be able to devote the whole of our income from subscriptions to the publication of our annual volume. I am sure that you will receive this most liberal gift of your past president as one in the highest degree worthy not only of praise in the present, but of imitation in the future. The pecuniary advantages which it confers upon us are solid, extensive, and durable. But, warmly as we appreciate them, I believe I may say that those who have been most closely associated with the early years of our Society derive yet greater pleasure from the fact that one so competent to judge should in so emphatic a manner have crowned their efforts with his approbation. I have next to allude to a remarkable coincidence. Mr. Bowman's offer was made only about a month ago, and quite unexpectedly

to us all, whereas for at least three months before this, and wholly unknown to him, the Council had had under consideration a proposal to recognise his pre-eminent position in respect to ophthalmology in Britain, and the invaluable services which he had already rendered to our Society. It was from Dr. Gowers that the suggestion had first come that we should found a lectureship to be known as the Bowman Lecture, but it was no sooner mentioned than it was received with unanimous approbation. This lecture will probably be an annual one, and will be delivered at a meeting specially appointed for the purpose. I cannot but think, however, that it is possible that in the future such societies as ours may find another kind of work open to them, which is only second in importance. I allude to the systematic and strenuous endeavour to diffuse rapidly amongst the profession at large, for the prompt benefit of our patients universally, all items of new knowledge which may have been obtained. There is another branch of the same topic on which I incline, if you will permit me, to enter into a little more detail: it offers possibly a sphere for much useful work in the future on the part of societies like ours. It is one, indeed, to which perhaps this Society in particular is more specially called than any other. I refer to the promotion of what may be named every-day therapeutics. I do not doubt that there are, at the present moment, whilst I am speaking to you, in the homes, the schools, the workhouses, and the hospitals of England, some thousands of children who are suffering from ulcerations on the cornea, attended with intolerance of light, causing the patient great suffering and annoyance through many months, and destined often to leave disfiguring and incapacitating scars. If my own experience may be trusted, I believe that three-fourths of these would be almost well in the course of a fortnight under the use of a very weak yellow oxide ointment. Many of them, no doubt, are getting it, but a considerable majority probably are not; for the rule of treatment is not yet universally acknowledged amongst specialists, and certainly not very widely known in the profession. But the fact that it is meritorious in individuals to abstain from pushing their favourite remedies, only throws the duty to which I have been alluding the more definitely upon public bodies like ourselves. No one could impugn our motives or doubt our sincerity, and our verdicts would be received, not certainly as final, but as entitled, at any rate, to a temporary acceptance. I might easily mention a number of special types and forms of eye disease—purulent ophthalmia, rheumatic iritis, episcleritis, catarrhal ophthalmia, glaucoma, and the like—for which definite schemes of treatment could easily be laid down. Some years ago, in the early days of the keratome, I felt so strongly on this subject that I had some thoughts of engaging a full page in THE LANCET for a big red-lettered anonymous advertisement, so staring that all must read it, stating in a dozen words the symptoms and inevitable result of glaucoma, together with the certainty of its cure by operation."

Dr. GEORGE JOHNSON begged to propose a vote of thanks to Mr. Bowman on behalf of the Society for his munificent gift. This was seconded by Mr. Wordsworth, and carried with acclamation.

Mr. W. H. JESSOP showed a girl aged twelve years, in whose family history there was a marked account of phthisis, she having also tubercular disease of both apices, especially the right. In the left eye, about the yellow spot, a round white brilliant swelling, ill-defined at the periphery, projected one millimetre. Between this swelling and the disc there were also about eight small brilliant spots. The case was regarded as one of doubtful choroidal tubercles.

Dr. J. A. ORMEROD brought forward a man aged forty-four, the subject of Left Hemiplegia and Atrophy of the Right Optic Nerve. The former symptom developed first fifteen months ago; the latter appeared last May without preceding neuritis. A rounded smooth projection also existed in the upper and outer part of the right globe, detaching the retina. The patient had had syphilis ten years ago, and there was no cardiac disease or albuminuria.—Mr. NETTLESHIP thought that the swelling in the right globe in Dr. Ormerod's case was probably due to a sarcoma of the choroid, with detachment of the retina.—In this view Mr. ADAMS concurred.—The case is to be submitted to a committee, composed of Messrs. Nettleship and Adams and Dr. Ormerod, for special report.

Mr. FREDERICK MASON, of Bath, showed a patient who had been the subject of a communication to the Society on December 8th, 1881 (THE LANCET, 1881, vol. ii., p. 1045). In this case there was a tumour at the sclero-corneal junction, which had not recurred after removal.

Mr. PIGEON exhibited for Dr. Brailey a case of Glaucoma of the Right Eye in a boy aged fourteen, following a blow from the cork of a lemonade bottle. The lens was not dislocated; but some opacities had appeared in this structure some three weeks after the accident. The instillation of eserine caused considerable improvement in the vision, and the tension of the globe diminished.

Mr. NETTLESHIP read notes of a case of Blindness of one eye with Hemianopia of the other, due to the pressure of a tumour on the optic nerve, chiasma, and tract on the same side as the blind eye. The man came under care first in 1876, at the age of thirty, for recent failure of the left eye. The disc showed slight atrophic changes, and was said by an earlier observer to have been inflamed. Subsequently this eye became nearly blind, the disc atrophied, and the patient lost the right half of the visual field in the other eye, the disc of which also became atrophic. The hemianopia was sharply defined, and the boundary line passed through the fixation point. The left third nerve also became paralysed. At the same time, discharge of bloody mucus from the left nostril, defective smell, difficulty in opening the jaw, and the appearance of a lump behind the jaw on the left side, pointed to a tumour at the base of the skull involving the optic nerve, and at a later stage the tract and third nerve on that side. The man died seven years after he was first seen by Mr. Nettleship, and a large tumour was found, apparently growing from the body of the sphenoid, and compressing, but not infiltrating, the parts mentioned, as well as the crus and pons.

Dr. SHARKEY read a paper on a case of Homonymous Hemianopia, probably due to a cortical lesion. The patient was a female aged fifty-one, who came under Dr. Sharkey's care on July 5th, 1883. The present illness began two years and a half before whilst the patient was walking across a hayfield, when she had the first of a series of "fits" of exactly similar character. The order of events in these attacks was as follows: Suddenly there appeared "in the right eye" a play of all the colours of the rainbow "quivering" and "fluttering" before her. Then the right arm became convulsed, and the forearm and hand were rotated inwards. Soon the right leg was rigidly extended backwards and outwards; then loss of consciousness supervened, and she bit her tongue. She remained unconscious of her surroundings, and when she did recover her senses she found she had a severe pain in the top of her head and weakness of the right arm, but none of the right leg. Moreover, she could see nothing on her right side without turning her head in that direction. She had no loss of sensation or of speech. When first seen by Dr. Sharkey she had a painful area on the top of her head posteriorly about two inches in diameter, which was tender on percussion. There was weakness of the right hand and arm, and right lateral homonymous hemianopia of such a kind that there remained a considerable area of normal central vision on all sides of the fixation point. Colour-vision was intact except in the blind portions. Dr. Sharkey thought that the diagnosis of a lesion of the left hemisphere affecting the cortical centre for the arm and its neighbourhood was as nearly certain as any diagnosis could be, which was not subjected to the test of an autopsy. The succession of phenomena above described presented a vivid and typical picture of cortical lesions. Ferrier long ago established a connexion between each hemisphere and the opposite eye, and localised the "visual centre" in the angular gyrus. But since then Munk has proved by experiment that lesions of other parts produce, not amblyopia of the opposite eye, but homonymous hemianopia. Dr. Sharkey's case showed that in such conditions central vision may be unaltered. This being the case, it proves that there must be to some extent a separation between the area in the cortex, which receives the peripheral fibres of the corresponding halves of the retinæ and that which receives the central fibres of the retina. The probabilities are in favour of the "visual centre" being an extensive expansion of grey matter in the posterior parts of the hemispheres, in which is represented separately every portion of the retinæ. And probably great variety will be found in the shape of visual defects in homonymous hemianopia due to cortical lesions. In order to represent the state of our knowledge the well-known diagram of Charcot requires slight modification. Leaving in his diagram the crossed fibres as representing the central fibres only of each retina, let the neighbouring but somewhat distinct cortical

centre be added, from which the peripheral fibres to corresponding halves of the retinæ start. From this centre draw a line running down the optic tract of its own side and bifurcating at the chiasma, one portion of the fibres passing to the periphery of the temporal half of the retina of the same side, and the other portion to the periphery of the nasal half of the opposite retina.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of the above Society was held on Oct. 3rd, Dr. Gervis, President, in the chair.

Hypertrophy of Mammæ.—Dr. J. A. MANSELL-MOULLIN showed a patient, aged eighteen, unmarried, the subject of hypertrophy of both mammæ. The patient's health was otherwise good. The nipples were small, the areolæ large.—Dr. CHAMPNEYS had seen a case in Professor Billroth's clinic treated by rest in bed, the breasts being suspended from above.

Tumour of Clitoris.—Dr. W. A. DUNCAN showed a large fibro-cellular tumour involving the clitoris and both nymphæ, which he had removed.

Ruptured Ovarian Cyst.—Dr. W. A. DUNCAN also showed a multilocular ovarian tumour, one of the cysts of which had ruptured during an ordinary examination, leading to fatal peritonitis.—A committee was appointed to examine and report upon the specimen.

Arrested Development of one Fœtus of Twins.—Dr. EDIS exhibited a specimen of this kind. One fœtus was born alive in the seventh month of pregnancy; the other, expelled seven hours before it, was shrivelled, and its placenta atrophied, apparently having died in utero about two months previously. Dr. Edis also showed Twin Fœtuses at about the fifth month of development.—Dr. MALINS had seen a case in which one fœtus had been born living at the eighth month; the growth of the other, expelled at the same time, having been arrested at the fourth month. Craveilhier had illustrated the same condition. Such cases showed the power of toleration possessed by the uterus; and were also interesting in their medico-legal aspect.

Placenta Succenturiata.—Dr. CHAMPNEYS showed a placenta succenturiata. It was impossible, from an examination of the afterbirth, to diagnose the retention in utero of such a body.—Dr. DALY said these cases were of medico-legal interest. He had been called to a case in which a woman died from hæmorrhage caused by a piece of placenta left in the uterus. An unqualified practitioner had attended to the placenta, and at the coroner's inquest pleaded that the retained piece was a supernumerary placenta, a view which was accepted by the jury.

Gangrene during Pregnancy.—Dr. SWAYNE related a case of gangrene occurring during the seventh month of pregnancy. The disease came on after a long journey, and attacked the integuments and muscles over a space the size of a man's fist on the upper and inner third of the right thigh. The symptoms had existed about four days before the occurrence of premature labour, but were not very severe until after delivery, when they became much intensified, and proved fatal early on the third day. There was no injury, wound, or erysipelatous inflammation to account for the occurrence.—Dr. BURCHELL said that, although the case was not clear, he could not help believing it to have been one of strangulated femoral hernia.—Dr. HERMAN asked if the case were not one of gangrenous carbuncular inflammation?—Dr. SWAYNE thought the most probable explanation was that the gangrene was caused by undue pressure on the iliac vessels, possibly from tight lacing, to which the patient was accustomed. The situation of the tumour precluded the idea of strangulated hernia, the vesication and absence of any head that of malignant carbuncle, and the absence of diffused redness at the onset that of erysipelas.

On the Anatomy, Physiology, and Pathology of the Os Uteri Internum.—This paper, by Dr. HENRY BENNET, was then read. The author had, in 1849, drawn attention to the existence of a muscular sphincter at the os uteri internum, and this, like all sphincters, was closed when at rest. This fact was accepted by many at the time, but now seemed to have passed out of mind. It had a most important bearing on uterine therapeutics. The ordinary, physiological, closed state of this sphincter offered resistance to the passage of the metallic sound, but a small wax bougie could be passed through it. By the use of such bougies he had, in 1846, discovered that the cavity of the uterus was not straight, but had an anterior concavity. This sphincter was no doubt developed by pregnancy. It opened slightly before, during, and after menstruation, and probably during sexual congress. It was relaxed by disease, such as fibroids, chronic uterine inflammation, and endometritis. The easy passage of the sound was therefore an indication of a morbid rather than of a healthy condition of the uterus. This fact had an important bearing on the theory and treatment of sterility. If a closed os uteri were presumed to be a morbid condition, then nearly all healthy young women who were examined would be erroneously considered to require surgical treatment.—Dr. GALABIN had no doubt of the existence of a sphincter at the os internum; this was shown by the constriction often seen at this point in a laminaria tent, and by the rapid contraction of the os after dilatation. But he could not agree with Dr. Bennet that it was normally completely closed. Where the passage of the ordinary sound was resisted, a smaller one without a bulbous end would often pass if the direction of the canal were hit upon, although a hitch was sometimes caused by flexion of the canal. He thought further evidence was much to be desired as to the cure of sterility by incision or dilatation of the cervix. His impression was that he had seen a larger proportion of pregnancies follow dilatation by bougies than incision. He thought it would be of great value if some of those who performed the operation would give the number of pregnancies following in a complete series of consecutive cases. The only such series he remembered did not show a greater number than might be accounted for by coincidence.—The PRESIDENT remarked on the interest and value of Dr. Bennet's paper. In former years he (the President) had rarely incised the os internum. But lately, where there was evident constriction (a fact of which he had no doubt), he had done so, and his results had been distinctly better. Where the os internum was fairly patulous, and the constriction affected the os externum alone, he was satisfied with its division.—Dr. HEYWOOD SMITH protested against the use of scissors to divide the os externum, for too extensive an incision was thus made, and the power of imbibition possessed by the external os destroyed. The most scientific method of doing the operation was with Sims's narrow-bladed knife.—Dr. PLAYFAIR believed very little in stenosis of the os internum, and not at all in its incision for the cure of sterility. Incision of the os externum in well-selected cases was occasionally followed by pregnancy, but he believed it was done far too often and too indiscriminately. He believed it acted not only by enlarging the os, but by remedying the conical condition of the cervix, which was more often than stenosis the cause of sterility.—Dr. CHAMPNEYS pointed out that difficulty in the passage of the sound was not proof of stenosis of the os internum. Difficulty might arise, even when the canal was larger than usual, from the instrument being passed in the wrong axis, or from its point catching in a fold of mucous membrane. It was only when the bulb of the sound was gripped during withdrawal that stenosis could be inferred.—Dr. AVELING was sure that contraction of the os internum was a cause of dysmenorrhœa and sterility, and believed that incision gave more permanent relief than dilatation. After incision he did not use a stem pessary, but passed the sound daily for a week, and then less often, till healing had taken place.—Dr. EDIS thought there were instances in which division of the internal as well as the external os was needed. Each case must be treated on its own merits, it being impossible to lay down any general rule. After incision he used a stem pessary, the patient being carefully watched.—Dr. MURRAY thought division of the os uteri for sterility alone of doubtful utility. He had seen many cases in which it had been done without good results. It was not free from risk to life, and ought not to be done simply at the request of the patient.—Dr. HENRY BENNET gathered that his views were generally accepted, although some might not go as far as he did. Deep division of the cervix had been formerly, and he believed was still, too frequently performed by some practitioners. The abuse of surgical treatment might be on the wane in England, but certainly was not elsewhere. It was therefore desirable to establish the anatomy, physiology, and pathology of the os internum on a sound basis. Other waves of opinion were setting in, equally exaggerated in their character; as, for instance, in America, the unjustifiable sewing up of the lacerated cervix uteri for insignificant lesions easily cured by the simplest local treatment, and with us the abuse of pessaries.

LIVERPOOL MEDICAL INSTITUTION.

A MEETING of this Society was held on the 11th inst., Mr. T. Shadford Walker, President, in the chair.

The customary conversazione at the opening meeting was limited this year to an exhibition of frozen sections of the human body and a collection of skulls and teeth from the Medical School. The former, prepared by Dr. Barrow and his assistant demonstrators, proved very attractive, for after being cut and hardened in spirit the sections had been allowed to dry slightly, and the various tissues then coloured with oil paint. They were mounted in spirit in large basins with flat glass tops, and were fixed in tinted plaster-of-Paris, the result being very effective. Some of the sections had been sketched in water-colours by Mr. Dixon, a senior student, the structures being all lettered and named, and corresponding letters being placed on the same structures in the sections. When all are completed in this way they are to be put in the dissecting-room. The skulls and teeth had been collected and prepared by Mr. Paul for the dental department of the school.

When the above specimens had been viewed, the PRESIDENT opened the session with a few introductory remarks, and the ordinary business was proceeded with.

Multiple Sarcoma.—Dr. CARTER showed the internal organs of a man aged twenty-two. The following is the history of the case. Three months ago he noticed two small lumps in the skin above the umbilicus. Shortly several others appeared; and when first seen, two months subsequently, there were thirty or forty over the trunk, but only one on the limbs. At the same time vomiting and jaundice came on, with progressive debility and hæmatemesis, till he sank and died. At the post-mortem examination a large mass of a soft sarcomatous appearance involved the pancreas, and another smaller mass infiltrated the root of the left lung, and the neighbouring thoracic and abdominal glands were affected. There were numerous nodules of small size in the liver and kidneys, and a rather large mass occupying the left adrenal. The deposits beneath the skin had the same appearance as those in the internal organs. Dr. Carter thought the mass in the pancreas to be the oldest. The growth was a round-celled sarcoma.

Tumour of the Medulla.—Dr. GLYNN read the history of a middle-aged man, who had contracted syphilis fourteen years ago, and was recently admitted with headache, vomiting, and hiccough. Shortly, there supervened numbness and loss of power on the left side and of the lips, paralysis of one vocal cord, and external strabismus. He was subject to what he called weak fits. Subsequently he became ataxic and salivated; but the reflexes and taste were normal. Optic neuritis became marked, and temperature high. No sugar in the urine. When raised in bed he was attacked with epileptic seizures. At the post-mortem a tumour was found occupying the restiform body below the level of the floor of the fourth ventricle, and extending through the medulla to the olivary nucleus. It involved the nuclei of the pneumogastric and hypoglossal nerves, and part of the long nucleus of the fifth.

Ligature of the Brachial for Wound of the Palm.—Mr. PUZEY read a short paper on this subject, based upon two cases in which a high division of the brachial was found. In each there had been several hæmorrhages, and the operation was only adopted when the symptoms became urgent. In the first case, an incision having been made over the brachial in the middle of the arm, a large artery was met with, upon ligature of which pulsation in the ulnar alone ceased. Further exploration discovered another similar vessel, which proved to be the radial. In the second case ligature of the main artery in the position of the brachial stopped pulsation in the radial, and lessened it in the ulnar. During the operation a large vessel, supposed to be the inferior profunda, was turned aside. Mr. Puzey subsequently believed this to be a high ulnar, and upon recurrence of hæmorrhage three days later he ligatured the ulnar at the wrist, after which recovery took place. From his experience of these cases, Mr. Puzey recommended that ligature of the brachial should be resorted to much earlier than was the usual custom for hæmorrhage from the palm.—In the discussion which followed, Mr. MITCHELL BANKS considered that in a fresh wound of the palm the bleeding vessel should if possible be ligatured, but that in older wounds the brachial should at once be tied upon the occurrence of secondary hæmorrhage.—Mr. RUSHTON PARKER and Dr. ALEXANDER advised ligature at the spot if the superficial arch were wounded, but compression in the case of the deep arch.—Dr. MACFIE CAMPBELL and Dr. BARROW criticised the anatomy of the high division of the brachial.—Mr. PAUL had found that in punctured wounds treated by compression in which secondary hæmorrhage had taken place there was usually a small false aneurism. He thought that it was rather this condition which prevented closure of the artery than any process of sloughing or ulceration, and, with antiseptic precautions, recommended ligature of the vessel at the injured part under all circumstances.

Reviews and Notices of Books.

A Dictionary of Domestic Medicine and Household Surgery. By SPENCER THOMSON, M.D. With a Chapter on the Management of the Sick Room. By J. C. STEELE, M.D.—Illustrated by numerous woodcuts and diagrams. Seventeenth Edition. London: Charles Griffin and Co., Exeter-street, Strand. 1883.—Books in their seventeenth edition are generally beyond either the praise or the blame of a critic. Conceding that systems of domestic medicine are inevitable and, in many circumstances of this travelling and colonising age, valuable, it is of great moment to choose a good one. On the whole, the present work is to be commended. It contains a great many discriminating articles on subjects of common and constant interest, such as Alcohol, Food, Dietaries, Fever, Cold in the Head, Constipation, Adulteration, Childhood, &c. We do not mean to say that all of these subjects are treated in a faultless way. In some of the articles there is an air of oldness—as e.g., the laudation of Mercury as an Anti-inflammatory Remedy; the Dry Treatment of Cold in the Head, by "the late" (still living, we are glad to say) Dr. C. J. B. Williams; the Continuance of Alcohol in the Treatment of Delirium Tremens; the praise of bloodletting "as a powerful auxiliary in the treatment of some diseases," with full descriptions of the mode of bloodletting, &c. But, with this qualification, the articles are well and judiciously written, and may be consulted with advantage where the advice of a doctor cannot immediately be had.

Alcoholic Inebriety. By JOSEPH PARRISH, M.D. Philadelphia: P. Blakiston and Co.—An additional monograph on this well-worn subject can only be justified by important new matter or by original views of accepted facts. The presumption may be made that the author would base his justification for the issue of his work on the latter rather than on the former plea. The following are the views he adopts on some of the more interesting points connected with the subject—viz., that intemperance may be simply a vice, and becomes a disease only when a definite change of character has been produced; that few criminals are drunkards, and the latter as a rule commit only minor crimes, the frequent repetition of which by individuals exaggerates the records of criminal intemperance. Inebriety is regarded as analogous to, but distinct from, insanity, and hence the treatment of inebriates in lunatic asylums is justly decried. A state called "cerebral automatism or trance" is described as supervening in some inebriates during a debauch, and in this state they may commit acts of violence of which they have no memory afterwards. The opinion may be expressed in regard to this that our legal tribunals would assuredly demand very stringent evidence before accepting this plea in bar of punishment. The chapters on treatment are diffuse, the conclusion being formed that the most successful plan is that which combines with wholesome restraint psychological and hygienic methods such as are employed in hospitals for inebriates.

Recollections of the Kabul Campaign, 1879-80. By JOSHUA DUKE, Bengal Medical Service. 8vo, pp. 424. London: Allen and Co. 1883.—This is a very interesting history of the

Kabul Campaign, undertaken in consequence of the murder of our envoy Sir Louis Cavagnari. It gives a full account of the march upon Kabul in September and October, 1879, the siege of our troops inside Sherpur from December 14th to the 24th, and the final defeat of the Afghans on the memorable 23rd of December, the glorious march of the force under Sir F. Roberts from Kabul to Kandahar, and the battle of Kandahar on September 1st, 1880. The proof sheets of the work were submitted by Surgeon-Major Duke to Sir F. Roberts, who, among other remarks upon them, says:—"I never expect to find a strictly accurate account of the campaign in Afghanistan written until the time comes for the historian to have access to the many papers and documents which are in the possession of myself and others who were the principal actors in the war. At the same time, you have formed very correct conclusions on some of the most important points." We have found the book very interesting reading, and it is well got up. Our only regret connected with it is that the author has given no information respecting the health of the troops. From the manner in which he has done his work we feel sure that he would have made any reference to the surgical history of the campaign most acceptable to his professional brethren.

A Treatise on Fractures. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgical Pathology in the Medical Faculty of the University of New York, Surgeon to Bellevue Hospital, &c. With 360 Illustrations on wood. London: J. and A. Churchill. 1883.—This book has evidently been prepared by Dr. Stimson with much care, and the result is a useful reference volume. The writings of Gurlt, Smith, Astley Cooper, Malgaigne, Hamilton, and many others have been freely made use of, and the volume is well up to date. The author has not imported anything that we can characterise as original into the book; and the arrangement of his matter is at times far more suggestive of a studious compilation than an original work, but little attempt being made at graphic descriptions, with details arranged in their relative proportion. The numerous woodcuts have been for the most part carefully selected from many sources; others are original. Dr. Stimson has not written a preface, and the index might with great advantage be made more complete.

Archives de Neurologie. Vol. VI., No. 17, September. Edited by MM. Charcot and Bourneville.—The current number is a valuable one, but perhaps less interesting than some of those which have preceded it. A continuation of the series of cases illustrative of atraumatic peripheral neuritis, by MM. Pitrès and Vaillard, is possibly the best contribution in the present issue. Dr. Legrand du Saulle has a short article on a case of so-called epileptic vertigo, during which the patient committed a murder; but the man was acquitted on the ground of insanity. There is a clinical paper on the headache of adolescents by Dr. Theodore Keller. A consideration of the evolution of delirium in insanity is the subject of some remarks by Paul Gérente. M. Daullo has written a careful description of the histological characters of a case of parenchymatous encephalitis limited to the grey substance of the cerebral cortex in which attacks of partial epilepsy (Jacksonian) constituted the chief clinical feature.

Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Tome XVIII. (for the year 1881). Paris: Asselin et Cie. 1882.—This volume consists of the large mass of information which was communicated to the Society during the year 1881; most of the topics herein contained received adequate notice in THE LANCET at the time that they appeared in the pages of *L'Union Médicale.* Amongst the papers we may mention: Syphilitic Tonsillitis, by Féréol; Rupture of large Aneurism of Pulmonary Artery, by Damaschino; Cholera of Fowls, by M. Cornil; Lesions of Bone in Hemiplegia, by Debove; the Bacilli of Leprosy, with excellent plates, by M. Cornil; the Pathogenic *rôle* of Microbes, by Cagal and Zuber; the Therapeutics of Resorcin, by Dujardin-Beaumetz; and articles on Syphilis by Martineau. The volume will be found of much value in the medical library as a work of reference.

Hydrobromic Acid in Nervous Affections. By C. L. DANA, M.D.—In these six pages the author comes to the conclusion that in all the milder affections for which the bromides are used the hydrobromic acid can be substituted. It is, in moderate doses, agreeable, non-irritating, and will cause no eruption or other symptom of bromism. The acid seemed to prove of value as a vascular and nervine sedative in "post- and pre-hemiplegic conditions." Unless given in very large doses, it takes several days to produce its best sedative effect.

Pneumatic Drainage. By ADOLPHE SMITH, F.C.S., &c. London: E. and F. N. Spon.—This pamphlet gives a complete description of the Berlier system of pneumatic drainage, which has been applied with great success at the Pépinière barracks, and over an area of some three miles and a half in Paris. The technical commission of the Municipal Council recently decided that the results were sufficiently favourable to warrant the adoption of the method on a more extensive scale. We need hardly point out that whatever is done in Paris is likely to be imitated by a large number of continental towns, and therefore Mr. Adolphe Smith's very ample account of the process is likely to prove very useful to all interested in the great question of drainage. Numerous illustrations serve to render M. Berlier's system easily intelligible. It differs considerably from the Lienur system, and has, over our English method of water carriage, the great advantage of avoiding all sewer ventilation or leakage. Mr. Smith may be congratulated on his timely pamphlet and lucid exposition of the subject.

In the Land of the Lion and the Sun, or Modern Persia. By C. J. WILLS, M D. London: Macmillan and Co. 1883.—This book contains the record of an experience of fifteen years passed by a medical man in Persia. The customs and modes of life which prevail in that comparatively little known country are described in an easy and unexaggerated manner, and the reader is not troubled with reflections and moralising on the part of the author, who throughout confines himself for the most part to matter of fact. The book is not—indeed, it does not pretend to be—an elaborate medical record, written solely for the use of the profession, but a pleasant chatty account of life in an out-of-the-way corner of the world, and it cannot fail to be read with pleasure and laid aside with regret.

New Inventions.

"THE PERFECT TUBE-CLEANER."

THIS instrument, registered by Charles Richard and Co., of Seething-lane, E.C., consists of a rod of fine twisted wire, some fourteen inches long, at one end of which is a small cotton brush and a loop, the latter being intended to facilitate the passing of the indiarubber tube through the aperture in the cork of the feeding bottle. By means of the cotton brush the teat, with a little manipulation, can be most effectually cleansed. At the other end the rod terminates in a coil of wire, arranged in the form of a cone, its apex joining the rod. The end bearing the cotton is first inserted into the tube, and the whole length of the rod is drawn through it. By the use of this appliance all impurities, such as clots of sour milk, &c., are completely removed, and one great objection to the use of the feeding-bottle is thus done away with.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1883.

THE Introductory Address of Professor GAMGEE, at Owens College, Manchester; of Mr. BENNETT MAY, at Queen's College, Birmingham; of Dr. CLIFFORD ALLBUTT, of the Leeds School of Medicine; and of Mr. ARTHUR JACKSON, of the Sheffield School—of all of which we gave an abstract last week—serve to show how keen will be the study of medicine in provincial schools if the work of provincial students at all responds to the high suggestions of their teachers, or the growing completeness of the apparatus at their command.

The account given by Professor GAMGEE of the scale of museums and laboratories at Manchester, and of the care which has been taken to make teaching tutorial and practical, as well as systematic, seems to make it clear that it will be the fault of the Manchester students themselves if they do not acquit themselves successfully at the examining boards. Such development of teaching power and material in our youngest university cannot fail to put her older sisters on their mettle, and doubtless to stimulate them to greater attention to the practical sciences, and especially to our own, than they have ever yet displayed. It is too soon to say yet what will be the value of the degrees of the Victoria University; but if Professor GAMGEE'S views are realised, the possession of these degrees will be an enviable distinction, and a guarantee of considerable general and medical accomplishment.

At Birmingham Mr. BENNETT MAY was able actually to refer to the high position of the students of Queen's College at the various examining bodies during the past year. After doing so he enunciated some very sensible opinions as to the proper proportion of the practical and the scientific that should enter into the curriculum of the medical student. Mr. MAY thinks that the existing curriculum is on the whole a satisfactory medium between that of those who would push too far the preliminary scientific demands upon students, and that of others who would reduce the requirement of such knowledge. His advice to students to consider well at the outset the qualification which would best fit their abilities and their requirements was very good. It is very unsatisfactory when a man's opportunities of obtaining a degree or a fellowship have passed before he knows the value of such distinctions; and then, as Mr. MAY says, he has either to obtain them at great sacrifices, or "to purchase substitutes," which never really satisfy him, and which certainly do not elevate him in the estimation of his professional brethren. Both Mr. MAY and Dr. ALLBUTT dwelt with emphasis on that greatest of all defects in medical education—an imperfect sense of the nature of the great medical duties—the tendency to refinement and precision of data, without cultivating a corresponding eye for the main factors of disease, and the main duties of a medical man with reference to it.

Dr. ALLBUTT'S address presented many subjects for criticism, and some for grave and anxious thought. We shall hope on another occasion to notice his views of medical ethics. Like many other members of the profession, he is of opinion that titles and peerages are not the fitting reward of medical merit. On the contrary, he thinks the hankering after such things somewhat undignified. Without differing much from Dr. ALLBUTT, we should state our views differently. We are decidedly of opinion that "the State" in our country has not adequately recognised and honoured medicine. We may admit that a medical man in the present House of Peers would be very like a fish out of water. But, for all that, we think the conspicuous absence of medical men of the first rank from the councils of the realm and in the Second Chamber is disrespectful to the profession and profoundly disadvantageous to the public. The appreciation of this fact should begin with the public, and not be forced upon it by the profession. But it cannot be doubted that before many years are over the Second Chamber of the nation will be something more than a place of honour for fortunate lawyers and those who are statesmen by the mere accident of birth; and that the JENNERS and the SIMONS of a near future, with the leading men of science and art in other directions, will find at once their reward and their larger opportunities of serving their generation in such a Chamber. Meantime the profession will consult its own dignity, as Dr. ALLBUTT suggests, in pursuing the even tenour of its way, and showing that sublime preference for the public good over its lower interests for which it has been distinguished. Its highest interest, as its highest glory, is in the abolition of disease, the prolongation of life, and the mitigation of suffering. We shall not here attempt to do justice to that lofty and interesting passage in which Dr. ALLBUTT discouraged a too exclusively medical estimate of life, and too exaggerated an idea of the necessity of a healthy body for the great ends of being. Our own profession would supply many examples, besides that of Dr. ADDISON, of the noblest work done by those who would have been rejected by the medical officer of an insurance office; and outside of our profession there are numbers who might speak, with POPE, of

> "That long disease, my life,"

who yet have done great things for their own and future generations.

Our space scarcely permits us to notice the very admirable address of Mr. ARTHUR JACKSON of Sheffield, with its large development of the definition of intemperance, extending this vice to all the extremes of thought and pursuit, and even of faith, which are to be found amongst us, and which lead to the degeneration of morals, of happiness, and of health.

A profession which can sound such notes as are contained in these addresses may lack the outward and visible signs of authority, but it must have increasing influence with every advance of intelligence and civilisation.

MR. SHIRLEY MURPHY'S Report on the recent Outbreak of Enteric Fever in St. Pancras shows the results of laborious research and closely reasoned argument; and, although it leaves no doubt as to the source of the visitation, it necessarily opens up for future investigation many points in connexion with the natural history of epidemic diseases in general, and of enteric fever in particular. One important link

in the chain of evidence is wanting, or is at least too weak to hold in connected series the more unassailable statements of facts. We refer to the comparative immunity from infection of persons living upon or near to the farms that supplied the milk to districts which suffered seriously through the vehicle in question. It has been suggested that the poison of enteric fever according to its age varies in its power of developing the characteristic signs and symptoms of the disease; and, judging from the analogy offered by splenic fever and other contagious disorders, grounds are not wanting to support the assumption. At the same time it is difficult to see why the germs which constitute the essence of the poison should appear almost inert in one stage and so potent for mischief in another. Then there are other facts that must not be lost sight of. Country people are more accustomed than the inhabitants of towns to boil their milk before drinking it, and in this way the contagium is more likely to be destroyed. Moreover, it is a debated question whether the milk is infected *ab initio* on account of the cows being affected with a mild attack of the fever, or whether the virus does not gain access to the secretion through the medium of contaminated water used to cleanse dairy utensils. If the latter view be correct, it affords a possible solution of the difficulty, since the milk employed for home consumption is very frequently distributed without having been changed from vessel to vessel. At any rate in this case the risk of infection would be minimised. In a few instances the cows have been known to suffer from some trifling ailment, but in most they have shown a clean bill of health; still it is by no means improbable that they may be, so to speak, the wet-nurses that carry the infection of enteric fever. Exact observations, with a view to the elucidation of this problem, are much needed.

According to NIEMEYER, one attack of enteric fever removes susceptibility to the disease, except in very rare cases, and this statement is generally held to be correct by those who have wide experience of the malady, and whose opinions consequently carry great weight. This must not be lost sight of when analysing the evidence that presents itself in epidemics, or individual cases, for it may serve to explain many apparent irregularities and inconsistencies; and especially does it behove us to examine carefully into the previous health of people who are habitually exposed to the conditions most favourable to the outbreak and spread of enteric fever.

Another point of interest is the fact that babies are singularly exempt from enteric fever, and this is of special significance with regard to these so-called "milk epidemics," since milk forms the staple article of diet of children of tender age. We cannot tell why the contagium of enteric fever should fail to find a suitable nidus for its development in the blood and tissues of the very young, any more than we can explain the frequent occurrence of other exanthems in infantile life. This age-selection, moreover, is not confined to specific diseases; it is found in such diathetic affections as gout, rheumatism, cancer, &c. Perhaps no stronger evidence could be adduced of the part played by the tissues in their own morbid conditions. As a subsidiary consideration the question whether boiled milk is as good a food as unboiled milk has its practical bearing here. Milk in the natural state seems *primâ facie* the best conceivable form of food yet boiling does not materially alter the composition, and what little deterioration, if any, it may cause, is as nothing compared with the certain advantages conferred by the crippling or destruction of the unseen germs of enteric fever.

Attention has been drawn to the following query: Does the drinking of larger or smaller quantities of infected milk affect the severity, as well as the probability, of attack? It is difficult to obtain direct evidence on this head in the case of enteric conveyed by milk; but, appealing again to analogy, we are inclined to give an affirmative reply. Take, for example, vaccination, where the number and size of the scars are the indication of a quantitative protection against small-pox. Now, this means that the wider the area of tissue inoculated with the virus, the greater the local field for the development of the latter. The poison, if in small amount, seems more capable of reproduction when it is concentrated, or, in other words, the effect is to some extent proportionate to the dose. Besides, there is undoubtedly a tendency on the part of the tissues to get rid of matter obnoxious to themselves, whether this be inorganic, organic, or organised; and this being so, we can understand how their vitality may be impaired to a variable extent according to the strength of the initial infection, and especially if we concur with the late Dr. MURCHISON'S view that the symptoms of enteric fever are dependent on the products of decomposition set up by the specific organisms, rather than on the direct action of the organisms themselves.

Much requires to be done in order to obtain the requisite data on which to build a perfect knowledge of enteric fever. Special aid by the State is given to the investigation of cholera abroad—to a disease, in fact, which but seldom reaches us; then, surely, there is a stronger reason why it should be rendered unsparingly in the struggle with a preventable disease that is ever in our midst. Medical officers of health are invaluable public servants—we need appeal no further in support of this statement than to Mr. Murphy's published report; but their many duties preclude their devoting sufficient time and energy to the study of the history of specific organisms, so obscure in their modes of life and action, so subtle in their influence, and yet withal so pregnant with results.

SIR ANDREW CLARK, in a short address to the members of the Clinical Society on their reassembling after the vacation, drew attention to the grave and usually fatal constitutional disturbance which not rarely follows the passage of a catheter. He believes that this danger is not sufficiently appreciated, and that surgeons do not fully understand the cause of the malady. At the same time, his remarks took rather the form of an appeal for information on the exact cause and nature of this "catheter fever." Sir ANDREW was careful to point out that he was not referring to the chills which often follow the passage of a catheter—the so-called urethral fever,—but to a more serious malady, attended with pyrexia, rapid weak pulse, dry tongue, anorexia, and adynamia, which generally ends fatally in a few days. The first thing that suggests itself in considering these cases is the fact that they are not met with as a sequel to catheterism in men who have been previously free from disease of the urinary organs. The history always is that

there has been long-standing stricture, or enlargement of the prostate, with atony of the bladder and chronic retention of urine, or calculus in the bladder; and that then, on some slight irritation of the urethra or bladder, such as is caused by the passage of a catheter, this serious chain of symptoms ensues. This undoubtedly throws great light on the pathology of the cases. The condition which is common to these various evils is a chronic interstitial inflammation of the kidney, especially of the cortex. The kidneys thus diseased may be little altered in their general appearance, but the capsule is a little less readily stripped off than usual, and leaves the surface of the organ irregular, and the cortex itself is abnormally pale. With the microscope, however, the change is at once to be detected in a cellular and fibrous intertubular infiltration and a granular condition of the epithelium. There may or there may not be superadded to this absorption of the pyramids the result of the pressure of urine dammed back in the pelvis of the kidney. When the cortex of the kidney is in this condition, a slight irritant is sometimes sufficient to light up an acute and fatal inflammation. This irritant may act directly upon the organ, as when the urine in the pelvis undergoes putrefaction; or indirectly in a reflex manner, as in the passage of a catheter or other instrument along the urethra, or in the performance of any operation upon the urinary tract. This acute interstitial nephritis tends to run on to suppuration, and causes lines and spots of pus or larger abscesses to be scattered through the cortex; the organ is at the same time swollen and greatly congested. The symptoms to which this acute affection gives rise are fever, usually attended with one or more rigors, nausea, often vomiting, dry brown tongue, loss of appetite, drowsiness, absence of spontaneous pain, though in some cases there is tenderness in one or other loin, failure in the pulse, and then, later on, cold clammy skin, deepening stupor, perhaps diarrhœa, coma, and death. Convulsions are very rare; œdema is absent; and as the urine is secreted in moderate quantity up to the end of life, the symptoms do not present a likeness to those familiar to physicians in Bright's disease. In the chronic form of the disease the urine is secreted in considerable quantity, is of low specific gravity, and only rarely contains a very small trace of albumen, and an occasional hyaline cast may be detected in it. In the acute form the urine is generally less abundant and more albuminous. But as there is often an added catarrh of the bladder, it is impossible to determine accurately the state of the urine as secreted by the kidneys. We would suggest, then, that the cases referred to by the President of the Clinical Society are those of chronic interstitial nephritis set up by chronic disease of the bladder, prostate, or urethra, in which an acute renal inflammation is induced by the passage of a catheter. The subject is a very important one, and now that attention has been called to it in so prominent a way, it is probable that the true nature of these cases will be more generally recognised.

MR. HUTCHINSON suggested a new departure in the method of diffusing knowledge in his address read at the first meeting of the Ophthalmological Society this session. He proposed that memoranda dealing with the treatment of many common affections of the eye should be prepared and issued to the members of the medical profession under the guidance of the Ophthalmological Society. In order clearly to understand the nature of the proposal, it is necessary, and will conduce to perspicuity, to discuss, first, the reasons for the issue of such memoranda; secondly, the method by which these documents should be distributed; and, lastly, why this kind of thing should be carried out rather by a corporate body than by other means. The subject, it will thus be seen, has to be treated from the points of view of theory, practice, and ethics.

There can be no doubt that a large number of cases of corneal ulcer do continually get worse mainly from the want of knowledge of the existence of simple remedies, and more especially of that valuable preparation the dilute yellow oxide ointment of mercury. Again, as Mr. HUTCHINSON urged, the number of instances of loss of sight from acute glaucoma which occur every year even now must be considerable, and this may be chiefly attributed to the lack of information regarding the proper time for the employment of iridectomy. Many excellent general practitioners do not realise the fact that, notwithstanding the presence of acute inflammation, the immediate performance of iridectomy is precisely the remedy, not only because the tension of the globe is thereby relieved, but also because the inflammatory state associated with the glaucoma must disappear by the same act. When we consider that it is hardly possible for the busy practitioner to have much time to devote to the acquisition of special knowledge of ocular diseases, and when we reflect on the amount of mischief and loss to the nation which annually accrues from such, in a measure excusable lack of knowledge, we think enough has been put forward to show that the theory of Mr. HUTCHINSON'S new departure rests on a sure basis. From the standpoint of ethics there can be nothing savouring of quackery in the carrying out of the scheme under the auspices of the Society. All individual names would be suppressed in the idea of the issue of instructions under the abstract title of Therapeutic Memoranda of the Ophthalmological Society, so that no accusation could be made against the proposal on this score. There is yet the further argument, also alluded to by Mr. HUTCHINSON, that advertising quacks may establish a lucrative business out of the knowledge of one or two simple remedies, which, however powerful in doing good, are also probably for the most part powerless to do evil. Altogether, we think the suggestion of Mr. JONATHAN HUTCHINSON is of considerable importance, and hope that the Society mentioned, and possibly other more or less special societies, may see their way to the adoption of his overtures.

AT the weekly meeting of the Board of Guardians for the Holborn Union on the 10th inst., a report was adopted to the effect that the growing expenditure of the Metropolitan Asylums Board calls for the early and serious consideration of all the ratepaying authorities of the metropolis, such expenditure being increased by a body largely independent of the ratepayers; and that in view of the enormous expenditure being increased a conference of all the Boards of Guardians and vestries be held for the purpose of dealing with the constitution and duties of the said Board, and that a deputation from such conference be appointed to wait upon the President of the Local Government Board to give effect to this resolution.

Annotations.

"Ne quid nimis."

SIR JAMES PAGET ON RECREATION.

THE address recently delivered by Sir James Paget at the Working Men's College, though treating of a subject pretty well worn, was so suggestive as to warrant us in reverting to it from a standpoint slightly different from that taken by us in our remarks last week. Sir James laid down what he considered the essential elements of healthy recreation—uncertainty, wonder, and the exercise of skill; and analysed each, giving fitting examples. Mental fatigue may find its counterpart in mental or bodily exercise. The industrious student, often at the hour of midnight, lays aside his intricate mathematical problem, or record of disease, or involved legal argument, and turns with a sense of relief, not alone to indolent repose, but often to follow the development of an enchanting love story, or the word painting of such a novel as "Endymion." Or he takes up his cue for a game of billiards, his mind exhilarated by the contemplation of a skilfully applied "side" or "force" and knowledge of "strength" and "angles." His nerve-cells, in a state of tension, or polarised as it were by hours of study, are gently lulled to rest by inaction, or action of another kind. We find in nature wonderfully diversified methods of attaining the desired end. It seems as though in some cases the bane is its own antidote, as when one form of mental strain is relieved by another of like kind. In our own profession, who has not changed, with foreseen advantage and ease, a dissertation on obstetric mechanism by Barnes for a pathological discourse by Billroth? But the highest advantage is gained perhaps when recreation combines both mental and physical exercise. Nothing is more conducive to the repair of an over-wrought brain than a mountain ramble, made interesting by observation of the works of nature. How differently does the dissection of a plant, or the chipping of a rock, seem under such circumstances. There is a certainty of acquiring knowledge—a certainty of success, without the dread of failure at an examination. When Sir James speaks of the American marvelling at our hansom cabs, he recalls to our mind the pleasure that lit up the countenance of an American lady as she remarked, "There are two things in which you English beat us—your strawberries and green peas." These things seem trifles in themselves, and yet they represent moments of relief in the days and hours of strain. It should be a part of the education of students to teach them how to play, and to place the means of harmless recreation within their reach. Clubs attached to our medical schools, debating societies, cricket, and football, are among the resources that go to lighten the labour which brings much enjoyment, but some necessary distress. The yearly holiday, or the vacation after term, is not enough; there should be an oft-recurring alternation of work and play.

ALLEGED DISCOVERY OF THE CHOLERA BACILLUS.

IT has been announced that the German Commission under Dr. R. Koch, which was sent in August last to Egypt to investigate cholera, has reported to the German Chancellor that its labours, so far as Egypt is concerned, are at an end; but, owing to the important results so far obtained, they have sought and obtained permission to continue their researches in the home of cholera—India. The Commission (which consists of Dr. Koch and his two assistants, Drs. Gaffky and Fischer) has therefore left Alexandria for Cairo, *en route* for Bombay. The methods pursued by the Commission in this inquiry have been those which have been so fruitful of results in recent researches into the etiology of infectious diseases. Although they failed to detect any specific micro-organism in the cholera dejections or intestinal contents, a peculiar kind of bacillus, much resembling in its characters that of glanders, has been discovered by them in the intestinal walls, the post-mortem examinations being made sufficiently early to preclude the idea that these organisms were connected with putrefaction. The cessation of the epidemic in Egypt has not only deprived them of the material necessary to the further prosecution of this research, but has left them without means to verify the possibly specific nature of these bacilli by the method of inoculation in animals. Sufficient has been gained, however, to justify their request to be allowed to proceed to the centres of the disease, where they will enjoy great opportunities for the prosecution of their work. It must be a matter of congratulation, not only to Germany, but to the whole world, that at last there is some hope of the true nature of cholera being brought to light, and that the method of research initiated by Pasteur and pursued by Koch, which has done so much of late years to enlarge our knowledge of many hitherto obscure affections, seems likely to lead to results of immeasurable importance.

It has not yet been announced what results have been obtained by the Commission sent out by the French Government at the instance of Professor Pasteur. The lamented death from cholera of Dr. Thuillier, the leader of this Commission, may have seriously affected its labours; for whilst the German Commission is already on its way to further continue its research, the surviving members of the French Commission have returned home.

One important lesson is taught by the work of the German Commission which the English Government might take to heart. It seems probable that the discovery of the true nature of the virus of cholera will be effected in England's greatest dependency, but not by Englishmen. Is it not something of a humiliation and a reproach that this country, which has generally posed as the centre of sanitation and preventive medicine, should possess no such department as that over which Dr. Koch presides, and that it possesses no means of equipping a scientific commission like that which has been sent from Berlin? It is high time that the ground for such a reproach should no longer exist; and that England, with her vast resources, should not suffer researches of such vast importance to be left in the hands of private individuals.

THE METROPOLITAN ASYLUMS BOARD AND PROVISION AGAINST EPIDEMICS.

AT the ordinary meeting of the Metropolitan Asylums Board on the 13th inst., letters were read from several hospital authorities and from the local Poor-law authorities in response to invitations issued by the managers at the instance of the Government, to show what accommodation, in the case of cholera appearing in the metropolis, could be obtained in each locality, the metropolis, through the Common Poor Fund, being charged with the cost of such provision as the "first line of defence" against the spread of the disease, the localities themselves being chargeable for local epidemics. The authorities of St. Bartholomew's Hospital undertake to place two wards of fifty beds at the disposal of the managers of the Board, with the promise of further accommodation if the disease became epidemic around Smithfield; those of King's College state that they will at any time within the next twelve months arrange to set apart fifty beds; and the authorities of St. Thomas's Hospital reply that they will not find it possible to arrange for any accommodation. The letters from the various Poor-law authorities contained promises of 205 beds in different parts of the metropolis. In reply to a question by the Local Government Board as to

what answer the Board could give to the objections which have been raised by the Rotherhithe Vestry to the purchase of a wharf in Trinity-street, Rotherhithe, from which patients could be transferred from ambulances to a river ambulance for conveyance to the hospital ships, it was stated that the reasons which influenced the selection of the said wharf were (*a*) its proximity to a large and populous district in the south of London in which small-pox, in the event of an epidemic occurring, might be expected to be specially prevalent, (*b*) the excellence of its approaches from the land side, (*c*) the convenience of its situation on the river, so far as the requirements of the Thames Conservators are concerned, and (*d*) the difficulty of acquiring a suitable site elsewhere. The returns from the fever hospitals which were then read showed that during the fortnight 162 cases had been admitted, as against 157 in the previous fortnight. During the fortnight 21 patients had died, and 45 had been discharged, leaving 549 under treatment, as against 452 a fortnight ago, an increase of 97.

BUSINESS LIFE.

IT is, unfortunately, one of the chief characteristics of modern business to be always in a hurry. In olden times it was different. Business of all kinds was carried on with much deliberation, and nothing was gained, or supposed to be gained, by that sort of high-pressure work which consists in being perpetually and impetuously hasteful. The habit of haste—for it is a habit—is actively cultivated in the City of London, and in all places and circles which follow the fashion "the City" has set. The moment a lad takes his seat on a stool before the lowest desk of a house of business, he begins to make-believe to others, and too quickly to himself, that he is overwhelmed with work. Merchants and managers require this farce to be played by everyone in their establishments, from the heads of departments to the youngest boy on the staff. The result is the formation of a "mental habit" of hurrying, which before long becomes the keynote and motive of the whole life. It is the custom to write and speak as though commercial men were really as much pressed for time as they appear to be; and wholesome, but not very intelligent, counsel is offered to the effect that it would be better to "get up a little earlier," and to do this and avoid that, with the view of preventing the physical dangers and evils which result from "running to catch trains," "eating hasty luncheons," and the like. Now the simple fact is, that all this haste and turmoil, prejudicial and often ruinous as it is, is artificial. If a "man of business" were to rise at five o'clock every morning and "his train" left at 8.30, he would from habit avoid leaving his house until too late to enable him to "catch" it comfortably. It would discredit his position and look *unbusiness-like* not to be in a hurry. So, in the selection of a train by which to travel, he always chooses one that arrives with barely time for him to reach his place of business at the hour appointed. It would ruin him in the eyes of the City, and be wholly opposed to his mental habit to go by an earlier train, and *saunter* to his office. The inference in business circles would be that he had little or nothing to do. The same habit runs through the life of the typical man of commerce. He likes to look and feel full of restrained yet bursting energy, and in his calmest moments to be so pressed, that if he were less capable than he is, he must be distraught. This affectation of suppressed force is the bane of City life. It is this that does so much harm to the nervous system. We sometimes see a locomotive standing waiting to start an express train; the steam is up to the highest pressure; the engineer must blow it off every few minutes, or the boiler would burst. This is a good simile for the man of business as we see him in London, and as he tries to be, or appears, in the provinces. The old merchants of London, who, nevertheless, amassed large fortunes and founded great families, were wont to stand at their doors in Cheapside and the leading thoroughfares, and were never in a hurry. What would be thought of anyone who dared to seem leisurely to-day? If those who furnish the "City men" of to-day with medical counsel would go right down to the bottom of things and try to cure the evil of this mental habit, they would do far more to prevent the spread of nervous disease and to arrest the thousand-and-one troubles of body and mind which spring from work and high pressure, and hurry, worry, and waste of energy, than by dealing in detail with particular forms and fruits of this evil, as is their wont.

THE LATE DR. THUILLIER.

OUR Paris correspondent writes:—The melancholy interest attached to the name of Dr. Thuillier must be my apology for sending youthe following communication extracted from a letter which appeared in *Le Temps*, and which, though tardy, will yet, I trust, not be too late for insertion in THE LANCET. The letter is dated Alexandria, Sept. 21st, 1883, and is signed by M. Roux, one of the four members of M. Pasteur's mission to Egypt. M. Roux writes:—"Thuillier and Nocardi went on Frday, the 14th, to Tantah, to examine some oxen that died from the cattle-plague; they returned on Saturday, and on Monday, the 17th, they went to the lazaret reserved for animals at the slaughter-yard, to get some bullock's blood for experiment. Thuillier had a loose stool in the morning; he was, however, lively and in good spirits, and took a bath in the sea, and in the evening we took a drive together. At dinner he ate with a good appetite, and went to bed about half-past ten. He soon fell asleep. About three o'clock in the morning he had another stool, and not feeling very well, he entered his companion's room, saying, 'I feel very ill," and then fell prostrate on the floor. Strauss and I carried him to his bed; his face was pale and covered with sweat; his hands were cold, like those of a man in an attack of syncope. We first thought he was suffering from simple indigestion. He soon recovered, took a small draught of opium, and went to sleep. I slept in the same room with him. At five o'clock he had a copious watery stool. I put him to bed. He vomited his dinner undigested, just as he had taken it the day before. Feeling somewhat relieved, he fell asleep again, after having taken another dose of opium. At seven o'clock he appeared to me to be worse; he complained of feeling cold, and had another motion. Strauss and I were obliged to hold him up to prevent his fainting. From this moment everything passed involuntarily; and, in spite of the most energetic treatment, at eight o'clock he was already moribund, with cramps of the muscles of the legs, of the thighs, and of the diaphragm, with alteration of the countenance; nothing, in fact, being wanting to complete the picture of cholera of the most terrible description. We employed strong frictions. All the French and Italian doctors were present. Iced champagne was given freely, and subcutaneous injections of ether were resorted to. In short, everything that could be devised was done to prevent a fatal issue. The respiration became oppressed, but, thanks to the vigorous rubbing, the temperature of the body was kept up. About noon there was a slight change for the better; the pulse at the wrist could be felt. At two o'clock the respiration was more laboured; the motions still passed involuntarily; the pulse had disappeared. The respiration and the circulation were kept up only by the injections of ether and by champagne. The features were altered, but not quite choleraic, and, notwithstanding all our exertions, he expired on Wednesday morning, the 19th, in a state of

asphyxia, which lasted more than twenty-four hours." The body of the lamented young man was embalmed, and buried the same afternoon in the presence of a large number of mourners of all ranks and classes, representing the different nations of which the population of Alexandria is composed; M. Roux concludes his letter with the remark that in this affliction everything was incomprehensible, particularly as they had not seen a cholera patient for more than fifteen days, and our lamented friend took the greatest care of himself, carrying out to the letter the precautionary measures dictated by M. Pasteur. It is a pity that M. Roux does not give the precise date at which Dr. Thuillier had seen a cholera patient for the last time, as then we should have a clue to the duration of the stage of incubation, which would go far to confirm or disprove the theory in vogue.

TYPHOID FEVER AT BAGSHOT.

TYPHOID FEVER, attributed to the defective state of the drainage arrangements, is now prevalent at Bagshot. It appears that the first cases occurred in July, although it was not brought to the notice of the officers of the sanitary authority until October 1st. In seven houses in the village ten cases have occurred, two of the patients being women and the rest children. Eight years ago Mr. Jacob reported to the Chertsey Rural Sanitary Authority most unfavourably on the state of the closets and drainage arrangements of Bagshot, and advised systematic improvements in these matters, such as the provision of a main sewer through the village, and the introduction of pail-closets or waterclosets; and in May last the inspector of the Rural Sanitary Authority presented a full report on the same subjects, and recommended prompt attention being paid to the matter. The Board, however, apparently indifferent to the danger which threatened the unhappy people whose sanitary condition was entrusted to its care, did not accept the advice of its medical officer of health or the recommendations of its inspector. It has been sowing the wind since 1874, and now in 1883 the whirlwind is being reaped; the harvest is late, but it is a plentiful one. And this state of affairs within a few yards of the Duke of Connaught! We wonder if any improvement in sanitary matters will now be made, or will the callousness and indifference of the past eight years be continued.

THE ALLEGED CASE OF ARSENIC POISONING IN LIVERPOOL.

THE inquiry which is now being made by the Liverpool city coroner and police into the circumstances attending the death of Thomas Higgins promises to be one of the greatest interest and importance, both in its medico-legal aspects and as concerning the safety of the lives of the public. The case is one calculated to cause much uneasiness in the minds of the general public, as also to create sensational and exaggerated reports, which have in the present instance been freely circulated in the daily press. The facts disclosed at the adjourned inquest on the 12th inst., and at the police-court on the 17th, are sufficiently grave, and are briefly as follows:—The deceased was a bricklayer's labourer, residing with his wife in a cellar at No. 27, Ascot-street, situated in the northern part of Liverpool, and inhabited by working men. He was attended by Dr. Whitford for inflammation of the bowels, and seen several times by that gentleman previously to his death, which occurred somewhat suddenly on the 2nd inst. Dr. Whitford was surprised at the sudden nature of the death, and appears to have had misgivings; but there being nothing to warrant suspicion of foul play, he gave a certificate assigning the cause of death to inflammation of the bowels. The death was duly registered, and a burial order issued. But a brother of the deceased, hearing accidentally of the latter's sudden death, was naturally surprised at never having been informed of his illness, although he resided near; and this surprise was increased when he discovered that his brother had been ensured in an industrial insurance society by his wife's sister, a woman named Flannigan. He accordingly saw Dr. Whitford, communicated to him his suspicions, and was by him advised to consult the coroner, Mr. Clarke Aspinell. The burial of the deceased, which was arranged to take place two days after death, was stopped, and a post-mortem examination made by Dr. Whitford, who removed the stomach with its contents, and portions of the liver and intestines, which were delivered to Mr. Davies, the analytical chemist of the Royal Institution. The whole of the details were not given, the coroner merely requiring formal evidence before adjourning the inquest until Nov. 2nd. It was, however, stated by Dr. Whitford that he found inflammatory patches upon the stomach and bowels, while Mr. Davies found a quantity of arsenic equivalent to one-third of a grain of white arsenic. The woman Flannigan, who was in the house when the coroner's officer, accompanied by a policeman, arrived, left suddenly, and was not arrested until the 15th. On the 17th she and her sister, the deceased's wife, were brought before Mr. Raffles, the stipendiary magistrate of Liverpool, charged with causing the death of the deceased by poison, and were remanded.

SANITARY MATTERS IN DUNDEE.

ANOTHER instance of the dangers occasioned to a community by insanitary conditions in dairies was brought to light a short time ago in Dundee. A dairyman was charged with occupying part of his dwelling-house as a dairy, while the ventilation, cleansing, and drainage were not sufficient for the protection of the milk from contamination; and also with allowing his wife and servant to milk cows and assist in the sale of milk after they had been engaged nursing a boy who was suffering from scarlet fever. An outbreak of scarlet fever recently occurred in the neighbourhood, and the sanitary authorities discovered that in each case the parties got milk from the dairyman in question. Seventeen cases of fever were traced to this source, and of these five were fatal. When the dairy was visited, it was found that the milk was stored in the dwelling-house, and sold in the kitchen where the sick boy was lying. The offender pleaded guilty. A fine of £5 was imposed—a very moderate penalty, considering the enormity of the offence.

Still another grave infringement of sanitary laws has recently occurred, a ship arriving from the East Indies, and suspected of having had cholera on board, having been allowed to enter the Dundee docks, her officers and crew also having been permitted to leave the vessel. At the instance of the Board of Supervision, Dr. Littlejohn visited Dundee on the 12th inst. to inquire into the circumstances of the arrival at that port on October 9th of the *Simla* from Calcutta. Notwithstanding the fact that choleraic illness had occurred on the voyage, that the medical officer had sent instructions to the captain to await inspection, and that the Customs officers had boarded the ship, she was berthed in dock and her crew scattered over the country before Dr. Anderson had had an opportunity of visiting the vessel. Dr. Littlejohn corroborates the action of the local medical officer throughout the case, but seems to doubt whether the four cases, with one death, which occurred shortly after leaving Calcutta were in reality cases of Asiatic cholera. He draws attention to the circumstance that the crew, with the exception of the four affected, remained in good health, "although the effects of the man whose case proved fatal were distributed by auction among them." Dr. Littlejohn says, "But the fact remains, to

which I beg to call the serious attention of the Board, that, by the culpable laxity of the Board of Trade officials, this vessel, in defiance of the regulations of the Privy Council, was allowed to enter a port without any communication with the local authority"; and he proceeds to show how a similar error at Arbroath allowed of an outbreak of small-pox there, followed by much expense and alarm to the community. One curious point in the present case is that the owners of the ship have served an intimation on the medical officer of health, holding him responsible for all expenses incurred by the delay in the discharge of the cargo. Dr. Littlejohn has since expressed his special satisfaction with the work of the sanitary officials of Dundee in connexion with this case.

"THE TAXES ON CARRIAGES."

THE Institute of British Carriage Manufacturers is making a special effort to bring the subject of "taxes on carriages" under the notice of the public and the Legislature. The question involved is one which concerns the medical profession in an important degree. The great bulk of practitioners in every grade and branch of the profession use carriages for purely "business" purposes. They are as much necessary appliances of practice as stethoscopes. Very few physicians, surgeons, or general practitioners keep carriages for purposes of pleasure. Those who form the exception to this rule have separate carriages for their families. Their own broughams or open carriages are essentially business vehicles, as much as the butcher's cart or the carrier's van. It is simply monstrous that such conveyances should be taxed. As the Institute of Manufacturers points out, the conditions are so changed since this old tax was first imposed that it cannot now be defended on the original grounds. The "carriage" is no longer a luxurious appliance of the rich man. It is an apparatus in the work of bread-winning, and ought so to be regarded. We are not of course, in any immediate sense, interested in the contention that this tax presses heavily on the manufacturer, compelling him to break up old carriages sooner than he would otherwise do, and limiting his sale; but we are deeply interested in the fact that carriages which are not half worn out cannot be made available for the use of the sick and for other purposes, because the tax, and that alone, prevents their being placed in the market at low rates, either for sale or hire. It is an anomaly to find that the annual tax paid on a carriage, in the course of years, amounts to more than its first cost. Lord Algernon Percy has promised to bring the matter before the House of Commons during the ensuing session. It will discredit the political economy of the Government if the demand for the repeal of a tax so indefensible and oppressive as this, is not successful.

ARTERIAL LESIONS IN VARICOSE ULCERS.

THE difficulty of interpreting the relations of associated changes constitutes one of the most beneficial exercises for the development of a logical state of mind. Cornil and Ranvier have observed endarteritis frequently in the tissues of wounds, ulcers, and inflammations of the connective tissue. Some new investigations on varicose ulcers by MM. Arnozan and Boursier have revealed a remarkable degree of change in the arteries of the parts bounding the ulcer. In the smallest vessels an increase in thickness of the muscular coat has been measured. In the larger arteries areas of endarteritis were discovered together with hypertrophy of the muscular coat. What is the sequence of events in such a varicose ulcer? Is the ulceration dependent on the arterial disease, or are the vascular changes secondary in point of time to the ulceration? Are all the changes the result of increased venous congestion, or is there some other cause at the root of the whole of the alterations?

PROFESSOR HUXLEY ON MEDICAL LEGISLATION.

IT is curious to notice the conservative element which there is in every iconoclast. Professor Huxley is no exception. Our readers know, from our notices of his special report in the Report of the Royal Commissioners on Medical Acts, that Professor Huxley would retain the whole of the existing superfluous machinery for licensing practitioners of medicine, and even would allow them to carry on competition with each other, as at present. He is obliged, in order to save all these bodies, to suggest the provision of coadjutors in the examinations, to be appointed by the Medical Council or some other central body. It is something, however, to have Professor Huxley's admission of "the notorious exceptions" to fair examinations, and desire for the advent of the time when "single subject diplomas should cease to be granted." So far are we from agreeing with Professor Huxley in regarding the Government measure as too sweeping, that we think it too conservative. It leaves far too much to the existing bodies. When nineteen bodies have to be virtually superseded by three, it would have been better to have made the reform complete. The Government, out of respect to existing institutions, many of which have no longer any *raison d'être*, has been most merciful, and has given them much influence in the new order of things. But it might almost as well leave matters where they are as adopt Professor Huxley's "simple" expedient, which would be difficult of execution, costly in operation, and unsatisfactory in result.

A PROVIDENT CONVALESCENT HOME.

PROVIDENT FUNDS for sickness and death are now very common in England, and have been an incalculable boon to the artisan class. The strong and well contribute cheerfully to the relief of the sick and the burial of the dead, but, as far as we know, there is but one instance of what may be termed a co-operative Convalescent Home. We have recently visited this Home, and have found it so interesting and instructive a study that we propose to give a short account of it in the hope that such a good example may be followed. In 1871, a member of the well-known firm of Chance Brothers, of the Oldbury Alkali Works, Birmingham, started, with the assistance of friends, a small cottage Convalescent Home in a country spot near Birmingham. This was found so useful that, a couple of years later, Mr. Alex. Chance proposed to his men to found a new and larger Home, with the help of the firm, but on co-operative principles. The men took up the idea with spirit. The firm found the land and one-half the cost of building, and the workmen found the rest. A pretty and comfortable cottage was built at Quinton, about four miles from the works. The building provides eight beds for patients, and the domestic arrangements seem as good as possible. The food is plentiful and of good quality, and the whole place has the aspect of a gentleman's house. The initial cost of the building and furniture, including the purchase of land and the laying out of the garden, was £1367; and the annual expenditure for the last six years has been £933, of which Messrs. Chance have contributed £126, or 13 per cent., while the remaining 87 per cent. has been paid by the men, mainly by a weekly subscription of a penny per week; the penny yields, indeed, no less a sum than £714 15*s.* 8*d.* per annum. All the workmen and their families have access, under proper conditions, to this comfortable and even luxurious Home. They cannot go to it for medical treatment, as to a hospital; but they can, and do, go for the strength which is apt to come so slowly during convalescence. They pay nothing while they are there, and have nothing to do but to eat, drink (anything but alcohol), amuse themselves, and admire (as many of them no doubt do) the beautiful

view from the windows and garden. The men are proud of the place. They regard it as their own, and their masters, with generous wisdom, do so likewise. It is not a very expensive luxury, and they can afford it; and many of them find it pleasant to stroll out on summer evenings with their wives and children, and have tea, as they are entitled to do, in the pretty garden. The place, in fact, seems to do good to minds as well as bodies. The management is simple enough. Once a year a committee of six is selected by the men by ballot, of whom three are foremen and three ordinary workmen, Mr. Chance being permanent chairman. None are eligible for admission but *employés* of the firm and their families, and each candidate must present a certificate signed by one of the recognised medical officers of the works. The accounts are audited with the utmost regularity, and are at all times open to the inspection of the men.

PURE WATER FOR CATTLE.

THE question of "pure water for cattle" which has been raised in the columns of *The Times* during the current week is one of such vital importance to farmers that we can only wonder that it has never been seriously discussed before. It takes time, to be sure, for the teachings of science to penetrate to all members of a community; but it has long been common knowledge that impure water is not only a vehicle of contagion but a source of disease in man, and there can be no question that it is an equally fertile source of disease among cattle. If common sense could only be applied in this matter, we should hear less of the ravages of foot-and-mouth disease, and probably of other epidemics of contagious disease in animals, not to mention the numerous forms of parasitic disease, of which the "sheep-rot" is an instance; and if, as we gather from the statements preferred by the writers referred to, the present Acts contain no provisions for enforcing rules as to the supply of water to herds and flocks, it is time they were amended in that direction. The *naïve* reply which one correspondent alleges is mostly given by the farmer when asked if he is not afraid to let his cattle drink at one of these abominable roadside yards—"Bless you, sir, they delight in it, they prefer it!"—is a sample of bucolic ignorance which is probably not overdrawn. No doubt in many rural districts the remedy for this state of affairs would be a matter of great trouble and expense; but, as the question of the water-supply to the inhabitants of such places has been, or ought to have been, solved, there is no reason against its extension to the case of cattle. As a mere matter of economics the effort should be made, and the results would soon convince the most sceptical.

SCIENTIFIC HANGING.

THE recent selection of a successor to Marwood in the office of common hangman naturally draws attention to the method of execution by hanging. It is of no immediate practical avail to discuss whether hanging is the best mode of inflicting capital punishment; but it is important to consider what precautions should be taken to render the process of extinguishing life by hanging as certain, quick, and painless as possible. Hanging may be fatal in three ways. First, by compressing the larynx or windpipe, and thereby producing asphyxia. This mode of death is comparatively slow and extremely painful, consciousness being only gradually lost, and the obstruction to the entrance of air causing distressing voluntary and involuntary efforts. The second method is that of compressing the vessels of the neck and producing intense venous congestion of the brain, with possible capillary hæmorrhages in places. At the same time, compression of the vagi nerves may induce inhibition of the heart; this would be generally combined with asphyxia, and would tend to quicken that process. The third way in which hanging can kill is by instantaneous injury to the central nervous system. This can only happen when the head is displaced from the spine, or a dislocation or fracture of the upper cervical vertebræ occurs; in either case the trunk falls forwards, and the arch of the atlas or of one of the lower cervical vertebræ crushes the spinal cord. In this case death must be painless and instantaneous, its mechanism being that long familiar in the "pithing" of animals. Dislocation can only be produced when the ligaments of the spine are subjected to severe and sudden strain, and the amount of strain necessary will vary considerably with different individuals. It will require in all cases a "long drop," and care must be taken that the rope does not catch in any part of the person, and does not break. It is very desirable that the exact mode of hanging should not be allowed to depend upon the caprice of a common hangman, and the Home Office might well draw up instructions to be observed in all executions, with a view of ensuring that the sentence of the law shall be carried out without unnecessary pain, and that justice shall be tempered with mercy.

PUBLIC PLEASURE GROUNDS.

WE have always insisted on the hygienic and therapeutic value of well-regulated exercise. Rest without it is idleness and depression; with it, recreation. In these days there is much enthusiasm for mental culture, and much utilitarian worship of profitable labour, but often proportionately little care for the maintenance of a sound physique, without which neither brain nor muscle can remain efficient. We therefore hail with satisfaction every movement of public opinion which aims at giving the body, especially in childhood, its due share of consideration. The gymnasia and playgrounds which have lately come into being in Drury-lane and elsewhere are hopeful signs of the times. Especially is it well that among these there are gymnasia for girls, who nearly as much as boys require and benefit by the gymnastic method. Fresh air is in no less request than muscular training. There is now many an odd corner in London and other large towns which might be utilised as a breathing space for the poorer inhabitants. Acres of streets are being remodelled by the Metropolitan Board of Works. It is to be hoped that here and there an open grass-plot, or a gravelled square for children's games, will replace the squalid court of former days. Many an old burial-ground has received its last tenant long years ago, and now lies open to the sun, and to nothing and no one else. If such a spot were cleansed and planted and made public, it would lose none of its original consecrated sanctity by its being devoted to the common good.

THE NEW ENTRIES.

THE following are the numbers of new students at the Medical Schools from which returns have been received:—

	Full course.	Occasional.	Total
St. Bartholomew's	120	60*	180
University College	83	58†	141
London	65	49	114
Guy's	74	20	94
St. Thomas's	64	28	92
King's College	57	21	78
Middlesex	35	10	45
St. George's	36	4	40
Charing-cross	32	6	38
St. Mary's	28	7	35
Westminster	14	5	19
Owens College	60	18†	78
Bristol	25	2	27

* Forty of these are students for London University.
† Preliminary Scientific.

THE EDINBURGH UNIVERSITY.

The Times devotes a column and a half to a correspondent who writes about the history of the University of Edinburgh, which is near its 300th anniversary, and which still grows apace, so far as the growth of a university can be judged by the increase in the number of its students and of its graduates. In twelve years it has doubled the number of its matriculated students, and trebled the number of its graduates. In 1870 it had 1698 matriculated students and 161 graduates. In 1883 its students numbered 3340, and its graduates 522. When the new university buildings are completed it will be the largest university in the world, and promises to be the best equipped. Henceforth the university should devote its anxiety rather to the quality than the quantity of its work. When the gates of graduation are made so wide as to admit 500 a year, it is well to have a misgiving lest they be not a little too wide.

ENTERPRISING UNDERTAKERS.

MEDICAL men are from time to time insulted by the overtures made by enterprising undertakers with a view to obtaining their recommendation to the families of deceased persons; but few proposals so unblushingly impudent as that recently made by a London undertaker to the members of the medical profession by means of a lithographed letter, marked "private and confidential," are happily known to history. The tradesman who has not scrupled to issue this trade circular has the audacity to offer practitioners a commission ranging from 5 to 20 per cent. according to the amount expended on the funeral; and to facilitate matters, he adds, "It will not be necessary in any case for you to wait upon me with reference thereto—[that is, the receipt of the commission], but simply to send a line to say you attended the deceased, as no inquiries will be made beyond this." We call attention to the matter, at the request of several correspondents, to mark the sense of the profession at the insult it has received, and to deter this particular tradesman—and others—from repeating the affront.

PROFESSIONAL AMENITIES AT THE CAPE.

AN action for libel was recently brought by Dr. G. A. Batchelor of Ventersburg, Africa, against Mr. H. W. Hepworth, surgeon, of the same village. Defendant appears to have instigated one Legg, his brother-in-law, to write a letter to the *Eastern Star*, reflecting upon Dr. Batchelor's treatment of a child upon whom he had performed tracheotomy, and stating that the operation had been conducted carelessly, and that it was undertaken without sufficient reason or skill. The plaintiff assessed his damages at £1000. The defence was a general denial of the allegations and of responsibility for the publication of them. Judgment was given for the plaintiff, damages £250.

THE GLASGOW FACULTY QUALIFICATIONS.

THE Faculty of Physicians and Surgeons of Glasgow have taken an important step in altering the rules under which their Fellowship shall be granted in future. They have adopted a resolution that their Fellowship shall, after a certain date, be granted only by examination. The details of the examination scheme are not yet arranged, but the principle has been definitely adopted. This will alter radically the relation which the Faculty has for a long time borne to the profession, especially to those members resident in Glasgow, but it will do away with the alleged discredit cast on the Faculty by the sale of its higher qualifications. Some such arrangement as this was in force at the Faculty many years ago, but was given up as unworkable after some years' trial. The manner of granting the Faculty's licence, also, has recently been under consideration. It is proposed that the licence be no longer obtainable singly, but only in conjunction with that of one of the Edinburgh colleges. This matter has been referred to a small committee, who are to confer with the Edinburgh corporation and report. It is understood that a proposal of a similar nature is before the Edinburgh College of Surgeons.

THE BENTLEY TESTIMONIAL.

WE are requested to state that the Rev. Canon Barry, Principal of King's College, London, will present the above testimonial, which consists of an illuminated album containing an address and list of the subscribers, together with a purse, to Professor Bentley, on the occasion of his retiring from the post of Dean of the Medical Faculty. The presentation will take place on Wednesday afternoon, Oct. 24th, at 4.30 P.M., in the large theatre of King's College.

LONDON WATER.

MESSRS. CROOKES, ODLING, and TIDY, having submitted to analysis 210 samples of water collected during the past month from the reservoirs, not, as usual, from the mains, of the several companies, report that "the water supplied to London during the month of September continues to be of most excellent quality. With comparatively few exceptions, the samples submitted were characterised by a remarkable absence from other than blue colour. In respect to aeration and freedom from organic matter, the waters were unimpeachably excellent."

THE CASE OF DR. STORY.

NOW that the Secretary of State for Home Affairs has seen his way to liberate Dr. Story from prison, it is a question for the Medical Council whether he should not be reinstated as a practitioner, by replacing his name on the Register. We venture to think the Council should appoint a committee to reconsider the whole case. The arguments which have had weight with the Secretary of State are certainly worthy of consideration by the Council.

AT the monthly meeting of the Braintree Local Board of Health on the 3rd inst., it was stated that the ground of the refusal by the Local Government of the use of the infectious ward at the Braintree Union by non-pauper patients is that it is irregular and not provided for by any Act of Parliament, although the Local Government Board have power to allow infectious wards to be transferred from the Poor-law guardians to the rural and urban sanitary authorities. This transfer, would, however, cost a sum probably larger in amount than would be necessary to provide independent accommodation, and therefore a conference with the medical officer was recommended, with a view to secure a cottage in an isolated position to serve as a hospital for infectious diseases. The matter was, after a lengthy discussion, referred back to a sub-committee, with instructions to report further at the next meeting of the Board.

MR. AYERST HENHAM HOOKER, at the invitation of the members of the Medical Society in connexion with Charing-cross Hospital, read on the 12th inst. a paper on his experiences in Egypt during the late cholera epidemic. He expressed the opinion that the medical men whom England had sent to Egypt had faithfully fulfilled the object of their mission, and that the British Government in selecting Dr. Hunter as special medical commissioner had made a wise choice. Mr. Hooker also advocated the advisability of establishing a medical mission to Egypt.

AT the request of the Collective Investigation Committee of the Manchester district, Mr. Jonathan Hutchinson has promised to deliver an address at the Owens College on Thursday next, Oct. 25th, at 4.15 P.M. Dr. Wm. Roberts, F.R.S., will preside, and all members of the profession are invited to attend. We may safely anticipate a most interesting address from the distinguished orator, and we expect that a very large number of the profession residing in the neighbourhood will avail themselves of the opportunity of hearing Mr. Hutchinson on Collectivism as applied to Medicine.

THE Hygienic Exhibition in Berlin was formally closed on the 15th inst. by the President of the Committee of Management, Herr Hobrecht. Its promoters have every reason to be satisfied with the results. The gross number of attendances has amounted to nearly half a million, and the receipts have reached the sum of 500,000 marks. Professor Pettenkofer of Munich, who has recently delivered a lecture at Berlin in connexion with the Exhibition, was entertained at dinner on the 9th inst. by the committee of the Exhibition and other medical men.

SEVERAL private and other asylums have recently ordered of Messrs. Merryweather and Sons "Chute" fire-escapes, Tozer fire-pumps, and other appliances, owing to the recent disaster at Southall. Amongst others we may mention: The Establishment, Ticehurst; Dr. Bower's, Springfield House, near Bedford; Parkhurst Asylum; Colney Hatch Asylum; Dr. Stilwell's, Moorcroft; &c.

THE *London Gazette* of the 16th inst. announces that the Queen has been pleased to give orders for the appointment of Henry Wentworth Acland, Esq., M.D., Regius Professor of Medicine in the University of Oxford, to be an Ordinary Member of the Civil Division of the Third Class, or Companion of the Most Honourable Order of the Bath.

BY an order dated Oct. 6th, 1883, M. Jaccoud, professor of pathology in the Faculty of Medicine of Paris, has been transferred by his own request to the chair of clinical medicine in the same Faculty, rendered vacant by the death of M. Lasègue. The chair of pathology has been, therefore, declared vacant.

AT King's College, Dr. Norman Dalton has been appointed Pathological Registrar, vice A. B. Barrow, M.B.; and the post of Curator of the Museum, vacated by Dr. Heneage Gibbes, has been filled by the appointment of Mr. Edgar Thurston.

AT the meeting of the Academy of Medicine of Paris, on the 16th inst., Dr. Legouest announced that his colleague, Dr. Rochard, was doing as well as possible, and hoped that he would soon be able to leave his room.

M. J. B. DUMAS, the illustrious chemist and general secretary of the Academy of Sciences, is, we regret to have to announce, seriously ill. Professor Vulpian, however, who is attending him, is hopeful of his recovery.

DR. JOHN SMITH was, on the 17th inst., elected President of the Edinburgh Royal College of Surgeons.

THE death is announced of Surgeon-General Crane, chief of the Army Medical Department, U.S.A.

A COMMITTEE, of which Admiral Sir Anthony H. Hopkins has been selected chairman, has been appointed by the Lords Commissioners of the Admiralty to inquire into the present system of nursing in the Royal Navy as now carried out in the several hospitals. It is expected that the report will lead to an increase of the staff of female nurses in the majority of the hospitals.

FOUR persons have died, and 180 are dangerously ill, a Ermsleben, in Saxony, from trichinosis caused by eating diseased pork.

HOSPITAL ADMINISTRATION.

No. XI.

THE MEDICAL EXECUTIVE STAFF.

IN dealing with the executive staff and its duties, it will be necessary to go into details which will interest only those who are holding or who may hereafter hold a resident appointment at one of the hospitals. Our theme to-day deals rather with the present and the future than with the past. Many hospitals are now governed by a medical superintendent as head of the executive staff, but with these it is not now our intention to deal, as they can be more appropriately treated when the relative advantages of medical superintendent and house governor or lay superintendent come to be considered. So much depends upon the executive staff and its efficiency that instances have occurred where a capable executive has made a hospital so popular and famous that its reputation has distanced all competitors. This was the case at one of the largest provincial towns, where there were two general hospitals, the oldest of which was controlled by an incompetent executive, whilst its younger and, up to the date in question, inferior and discredited rival could hardly obtain enough public support to pay its way. In three years the tables were completely turned. The old and reputable became the discredited and unpopular; the subscriptions fell off and were given to the younger institution, which soon had to be enlarged. The efficiency of the new hospital was the topic of general remark in the press and elsewhere, and the old institution lost public favour. The cause was the efficiency of the resident staff at the younger hospital, all of whom were animated by the feeling that the right course to pursue was to do the work in the best and most capable way. Work before self-promotion or interest was the watchword amongst the executive staff, and if we could print the names of the individuals and institutions, it would be admitted by all that the results were remarkable.

RELATIONS OF THE RESIDENT MEDICAL STAFF TO THE HONORARY MEDICAL STAFF.

If called upon to distinguish house-surgeons according to their characteristics, we should divide them into two classes: (1) Young men with too much self-confidence, and (2) those with too little. The former usually come fresh from the schools, where they have perhaps taken several of the numerous prizes, full of book knowledge, and puffed up by their testimonials. When they first enter a provincial hospital they regard country surgeons as "old fogeys" or past the times; they are apt to take too much upon themselves, and unless sharply looked after a catastrophe shortly ensues. The second class is very much to be preferred. They rely at first too little on themselves, and may now and again needlessly call upon the honorary staff. Such trouble is not, however, resented, and the honorary surgeons by kindness and courtesy will do much to enable a young man in a short time to gain that coolness and self-confidence which are necessary to make him an efficient surgeon. Other things being equal, the older the surgeon, the more expe-

rience will he have acquired; and though his right hand from age may have forgotten much of its cunning, yet the young house-surgeon will find that the older man will be able to supply him with stores of accumulated experience that will give him vast insight into diagnosis and treatment. On the other hand, by strict courtesy and deference to the prejudices and peculiarities of his seniors, a feeling of mutual confidence and esteem will be created, and the house-surgeon will find himself fully trusted, many minor operations and courses of treatment will be left to his discretion, and he will be upheld and guided to the highest professional advancement. To a certain extent the discretion of calling in the honorary staff rests with the house-surgeon; he is expected, however, not to needlessly trouble them in trivial cases, nor must he settle by himself the line of treatment to be adopted in the severer emergencies. Thus, amputations of fingers and toes and minor surgical operations will be treated by the house-surgeon, who will still have the staff to fall back upon should any unforeseen difficulty arise. But cases of hernia, unless at once returned without chloroform, many compound fractures involving questions as to treatment, injuries of the head, and other severe cases, must be brought at once to the knowledge of the staff. In provincial hospitals it is the duty of the house-surgeon to see that the instruments are kept clean and in good order, to look them out, and have them ready for any operation that is to be performed. He must exercise a close supervision over, and possess an intimate knowledge of, all the details and accessories of the operating-room. At operations either he or his assistant will give chloroform, or, if at liberty, he will render himself useful in any way that may be open to him. It was formerly the rule, even at London hospitals, for the house-surgeon to give anæsthetics; now, however, a special chloroformist is usually appointed, who makes more or less a specialty of it. This plan is not altogether advantageous; it tends too much to limit the knowledge of how properly to administer anæsthetics—a knowledge which ought to be practically acquired, certainly by most of the students, before leaving a London hospital.

THE RESIDENT STAFF.

This usually consists of the house-surgeon and house-physician and their assistants, but the manner in which the work is subdivided at the different hospitals varies greatly. At Guy's Hospital, for example, there is a house-surgeon at the head of the surgical department and a house-physician at the head of the medical department, and under each respectively are assistant officers, one of whom in each case has charge of the out-patients. Next to these officers, and to some extent under them, come the clinical assistants and dressers, a certain number being allotted to each physician or surgeon. These latter take duty in rotation, and during their week of office or the taking in week of their surgeon reside in the hospital. There are a few other details in this plan into which we need not closely enter, but which serve to show how the work is carried out. Thus the dresser of the preceding week resides also in the hospital and has his separate and defined duties, being available in cases of operation, &c. There are also resident a senior and junior obstetric surgeon, who take charge of the gynæcological wards and the midwifery department. Some such plan as this finds most favour in the London and larger provincial hospitals. In Scotland another arrangement is preferred. Each surgeon has his own house-surgeon, who takes charge of his special cases, and who performs many of the duties discharged by the dressers at Guy's Hospital. In each instance the house-surgeons are advanced students who have worked their way up through the various subordinate offices, and who have waited till they have been able to obtain their house-surgeoncy. This appointment is highly prized by the students, and often requires several extra years at the hospital before it can be achieved. At the smaller provincial hospitals there is no large medical school from which students can be drawn to fill such offices. They are therefore, in contradistinction to the former ones, paid appointments, and are often filled as a further step in their career by those who have held a similar post at a London hospital, and who are anxious to obtain more experience before settling down to practice. As a rule, then, the small provincial house-surgeoncies may be regarded as higher appointments, and they are much sought after by the best students who have any taste for surgery. They are offices involving great responsibility and requiring coolness and self-possession, where the young surgeon finds himself for the first time placed almost alone at the head of a large institution, and answerable for any severe case under treatment, or that may, at any moment, be admitted. He cannot, as in a London hospital, consult with his numerous resident colleagues, all of whom are, perhaps, nearly on a level with himself. Again, the honorary staff are not so easy to get at as the assistant surgeons of a London hospital, for, as a rule, they are men in large practice, who may be many miles away at the time of an emergency. The house-surgeon is, in these hospitals, the chief of the executive staff, and all the residents look up to him and expect him to act with capacity and decision. There is no better appointment for giving a young man confidence in himself, coolness in emergency, and readiness of resource. The subsidiary staff will depend entirely on the size of these provincial hospitals. There may be none. There may be an assistant house-surgeon entirely under the house-surgeon, or a house-physician, who takes more especial charge of the medical cases, but assists the house-surgeon, and who acts as his locum tenens. The dressings at these hospitals are done by the resident staff, and the pupils, if there are any. At some hospitals—Leicester, for example—dresserships have been established, which are held by senior students of London hospitals for a certain time before they are fully qualified, but after they have passed their primary examination. It is universally recognised that a house-surgeoncy is a most valuable appointment. We are told by some that these offices are held by men only just qualified, who are too young for such very important duties. It is difficult to see how they could be otherwise adequately filled. In practice it is found that the holders are fully qualified, and are, from the competition for such posts, in reality the pick of the junior profession; they have advanced to this promotion by a regular succession of steps through similar offices, and no training could well be more efficient. Any other plan of providing for the resident medical charge of these small provincial hospitals would not only seriously cripple the funds, but would render it more difficult for the honorary staff to efficiently control the surgical practice.

RELATIONS OF THE HOUSE-SURGEON TO OTHER OFFICERS AND OTHERS.

In the London and other large provincial hospitals the house-surgeon will be brought into relation almost solely with his professional colleagues, the management being relegated entirely to the superintendent, or steward, and the matron. His work will thus be wholly professional, involving the superintendence of the cases, &c.; all other questions being referred by him to the superintendent. At the smaller provincial hospitals, however, the house-surgeon will find himself almost alone and at the head of the whole establishment. He will have to conduct a large amount of correspondence, to answer innumerable questions from the governors and the patients' friends, to make arrangements for the removal and admission of patients, and to arrange numerous other minutiæ, which, if he does not possess tact and discretion, may at any moment cause him serious difficulty and trouble. Towards his professional subordi-

nate, whatever his title may be, he should always act in a courteous and gentlemanly manner. This officer may have equal qualifications with himself, and consider himself quite as good as his senior, save for the accident of their appointments. This feeling is natural, but must be neutralised by the senior, who, by the exercise of a little tact and kindly forbearance, should find no difficulty in making the two work harmoniously together. The matron at this class of institution is unfortunately, as a rule, a thorn in the side of the house-surgeon. Their duties, especially in regard to the nurses, so encroach upon each other, that without the greatest forbearance and delicacy a slight may at any moment be unintentionally inflicted, and then the sore rankles perhaps during the whole term of their holding office together. The house-surgeon must remember that the matron is of the weaker sex, and entitled therefore to the more consideration. He must bear in mind that she is in reality at the head of the nursing department, and although subordinate to himself, he should refer to her in all cases respecting the nurses, except those of a strictly professional character. He will find that such reference will give much pleasure, and cause her to endeavour to reconcile matters to his taste. Above all, let him remember never to easily lose his temper or feel that he is slighted when probably there is no reason for such a feeling, but let him always act as a gentleman, and with a tolerance for the weaknesses of the opposite sex. Did house-surgeons resolve so to act, there would be less reason than at present to deplore the usually unhappy differences which occur between these officers. If there are any pupils, the house-surgeon will see that it is to his advantage to increase their number. They assist him in the dressings, they increase the dignity of his office, and they tend to uphold the good name and reputation of the hospital. He will instruct them in the dressing, dispensing, and details of minor surgical cases that come to his knowledge. He will explain operations and the object of the various methods of treatment, and will give them classes on osteology, physiology, materia medica, &c., so that by the time they enter at a London school they will have thoroughly mastered the rudiments of several branches of their profession. Many a student has in after years looked back on his life at the country hospital as the most valuable part of his student career, and he has felt that to the house-surgeon who thus took the trouble to make him acquainted with most of his practical details he owes a life-long gratitude. For the weekly committee a large amount of routine work and bookkeeping will require to be done. This will relate chiefly to the admission and discharge of patients, and the reports of anything special that may require to be brought under the notice of the board. He must also hold himself in readiness to attend the meetings and explain any matter if required. It is his duty to make his statement to the board, and then to retire unless requested to remain. If he presumes to address a long speech to the board, an efficient chairman will be certain to cut it short. For the yearly report he will be expected to prepare the professional tables, giving the number of patients admitted and discharged, the results of treatment, &c. At some hospitals it is now the custom to publish in the yearly report a table of operations, giving the number and character of the operations performed, with their results. This table should be given by every hospital, and until some such plan is adopted, the vast store of knowledge that might be thus acquired is hopelessly lost.[1] The house-surgeon will be plied with letters on all sorts of questions connected with the cases in the hospital in which individual governors take an interest, and it is his duty to answer them all courteously, not forgetting how ignorant many even of the best educated lay men are on all medical and surgical questions. Other correspondence and interviews with the patients' friends will fall to his lot. He will have to explain operations that may be proposed, and to obtain the patients' and friends' consent for their performance. He will have to give a prognosis of the various cases, the probable length of their stay in hospital, and what further treatment may be required on their discharge. As the chief executive officer, a house-surgeon occupies no sinecure. His opportunities for doing good and showing small kindnesses to many are almost unlimited, and his reputation and future prosperity will largely depend upon the tact and courtesy which a cultivated gentleman will know how to exercise. It is not too much to say that the reward for much self-denying labour in the early days of professional life is, as a rule, more generous and liberal in the case of a house-surgeon to a country hospital than in most other positions.

[1] Vide THE LANCET, vol. i., 1883, p. 1141.

Pharmacology and Therapeutics.

COTOIN AND PARACOTOIN.

COTOIN and paracotoin are two but little known medicinal agents to which Albertoni has recently given some fresh attention (*Archiv. für Exp. Path. und Pharmac.*, Sept. 1883). Eight years ago the bark called coto-coto was first brought to England from Bolivia. Of its origin nothing further is known. Two kinds of bark are described, coto verum and paracoto. The chemical composition of cotoin is represented by the formula C_{22} H_{18} O_6, which is the active constituent of coto verum. According to Burkart, the subcutaneous injection of one gramme of cotoin into rabbits gives rise to no effect. Pribram believes that this substance possesses antiseptic properties, and he has recommended its use in small doses for some cases of diarrhœa in children. Albertoni finds that repeated small doses increases the appetite of healthy men without causing unpleasant sensations and without producing constipation. Subcutaneous and intravenous injections of alkaline solutions of cotoin performed on rabbits and dogs were followed by no remarkable phenomena. No influence is exerted by this agent on the process of digestion. It does not become dissolved in the gastric juice, but passes unchanged into the intestines. There can be no doubt that the principle is absorbed and excreted by the urine, as Albertoni proved on himself. The characteristic secretions of cotoin consist in the appearance of yellow colouration with alkalies, red tint with nitric acid, and brown-golden with sulphuric acid. Investigations were also made to determine the influence which cotoin might exert on the processes of decomposition, either in the intestines or outside the body. Taking the excretion of indol as the guide, it was discovered that during the administration of the drug phenol did not disappear from the urine. Nevertheless, Burkart and Pribram are right when they assert that in cases of diarrhœa under the medicinal use of cotoin the indican in the urine falls off. But Albertoni contends this is a secondary effect which depends on the cure of the intestinal lesion. From other artificial experiments the conclusion is arrived at that cotoin is not able to hinder putrefaction in the development of bacteria either in or outside the animal organism. Injections of solutions of cotoin into the jugular veins and other experiments went to show that cotoin could determine an active dilatation of the vessels of the abdomen. No other substance has yet been shown to possess a similar action on the vessels of the peritoneum, and of the intestines. Salvioli found by the artificial circulation of opium tincture that the quantity of blood flowing through the intestines was increased. Mosso has told us that chloral exercises a similar effect on the renal circulation. The vascular dilatation appears to be due to a paralysis of the muscular coat in the last two instances. As a matter of fact, opium and chloral lower the blood pressure, and after some time the circulation may cease. Paracotoin is a weaker cotoin in its physiological action. Therapeutically cotoin was found to be of value by Albertoni in cases of diarrhœa met with in the various forms of mental disease, in chronic intestinal catarrh, in looseness of cachectic states,

in the relaxation of pellagra, phthisis, and rickets. Cotoin is contraindicated in states of severe hyperæmia of the intestines, and where a tendency to melæna exists. Larger doses (from fifteen to twenty centigrammes per diem) were thought to be of more efficacy than smaller ones. The powder in capsules or emulsion, with gum, &c., may be ordered, or a solution in carbonate of soda with water and glycerine. Fronmüller thought that the colliquative sweating of consumptives was relieved by the drug. Paracotoin acts pretty much in the same way as cotoin. The combination of magistery of bismuth with cotoin, it is suggested, will be found to be of special value.

PLASTIC CLAY FOR SUPPOSITORIES.

The use of plastic clay as a convenient material for suppositories in some cases is recommended by Dr. Trippier (*L'Union Pharmaceutique*, xxiv., 398). The ordinary sculptor's modelling clay is used, the medicaments being dissolved in water and then worked into the mass; in this way salts of iron and copper, alum, or even vegetable extracts, may be incorporated by taking proper precautions. It is proposed to supply patients with the medicated clay, so that they can break off a portion and mould it between the fingers as required. There are difficulties in the way of maintaining the proper consistence. These accidents may be overcome by keeping the clay under a bell-glass in a moist atmosphere, or by the employment of glycerine, which is also said to have the additional advantage of giving stability to a mixture containing iodide of potassium. The formula for such a mass is: clay, 500 grammes; water, 50 grammes; potassii iodidi, 30 grammes; glycerine, 100 grammes (*Pharmaceut. Journ.* for Sept. 29th).

ABROTINE.

The common southernwood (Artemisia abrotanum) is reported by M. Craveri (*L'Union Pharm.*, xxiv, 410) to yield a crystallisable alkaloid which he has named "abrotine." The sulphate, hydrochlorate, and citrate have been prepared, all of which crystallise well, and the hydrochlorate is very soluble in water. Some preliminary physiological experiments with abrotine have been made by Dr. P. Giacova, who finds it has the power of reducing the temperature of the body and of arresting the action of the frog's heart in the course of a few minutes. The alkaloid and its salts appear also to possess the property of preventing the putrefaction of albuminoid matter (*Pharmaceutical Journal*, Sept. 29th).

BENZOPHENID.

In a recent trade report Messrs. Gehe state that they have taken an opportunity, while saturating a large quantity of benzoic acid sublimed from resin, to isolate the adherent body, upon the presence of which depends the brown colour that is now one of the official characters of benzoic acid in the German Pharmacopœia. It is believed to be "benzophenid," and when treated with alkalies breaks up into benzoic acid and phenol (*Pharmaceutical Journal*, September 29th). Some physiological experiments made with the substance by Dr. Robert of Strasburg seemed to show, however, that a similar decomposition does not take place in the body when benzophenid is administered internally; at least, no increase of phenol has been detected in the urine; in this behaviour it resembles chloral hydrate, which does not yield chloroform. Rabbits did not appear to be affected by it when administered in doses of ten grammes, and an alcoholic solution injected under the skin of a frog produced no perceptible symptoms.

SALICYLATE OF BISMUTH.

The salicylate of bismuth is reported to have given good results in the treatment of various forms of diarrhœa as well as in that of typhoid fever. Commercial examples of the salt have, however, been found by M. Jaillet to be variable in character and composition, and as a rule to yield to solvents uncombined with salicylic acid (*Bull. Com.*, xi., 383), due probably to a defective mode of preparation. There appear to be two salts, according to M. Jaillet, worthy of further investigation, an acid and a basic salicylate of bismuth. The modes of preparation are given in the *Pharmaceutical Journal* for September 29th.

OVERHEAD TELEGRAPH WIRES.—The Premier, in reply to a letter addressed to him, has stated that he understands the Post-office authorities are endeavouring to diminish the number of overhead wires belonging to them.

THE FINAL REPORT OF

THE ANTHROPOMETRIC COMMITTEE OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

No. II.

THE remaining portion of the report is devoted to a consideration of the media—i.e., the nurture, occupation, and various sanitary surroundings, which modify the physical development of the body; to the size of infants at birth; the growth of children of both sexes; the period of the attainment of maturity; and the influence of age on the physical proportions of the body. The classifications previously published by Mr. Roberts has been adopted. The population is divided into five classes, according to the more or less favourable conditions of life. Class 1 includes the professional classes and others living under the most favourable conditions of nurture and sanitary surroundings. This class is made the standard with which the others are compared. Class 2 includes the commercial classes, as clerks and shopkeepers; Class 3, agricultural labourers, fishermen, and miners; Class 4, artisans living in towns; and Class 5 includes persons following sedentary trades and factory operatives. These five classes form 4·46, 10·36, 47·46, 26·82, and 10·90 per cent. of the population respectively; and the mean stature of men (from twenty-five to thirty years of age) of each class is 69, 68, 67·5, 66·5, and 65·5 in., the difference between the best and worst being 3½ in. A corresponding difference exists in the stature of their children of the age of between eleven and twelve years, the means being 55, 54, 53, 52·5, and 51·5 in. for boys, and 55, 53·5, 52·5, 52, and 51·5 in. for girls for each class respectively, showing that the differentiation takes place at a very early age, and is probably largely hereditary. A table showing the length and weight of 917 infants of both sexes at birth gives the stature of males as 19·52, and females 19·32 in., a difference of only one-fifth of an inch. The weights are 7·1 lb. for males and 6·9 lb. for females, a difference of only about three ounces. This closeness in the size of males and females at birth, and the disposition to greater variation in males as shown by the tables, give rise to the following remarks:—It has been ascertained that still-births occur in this country in the proportion of 140 males to 100 females, and this higher death-rate of male infants has been attributed to their greater size. The largest surviving infants are those of males, and it would appear therefore that the physical (and most probably the mental) proportions of a race, and their uniformity within certain limits, are largely dependent on the size of the female pelvis, which acts as a gauge, as it were, of the race, and eliminates the largest infants, especially those with large heads (and presumably more brains), by preventing their survival at birth.

A series of tables and a chart are given to illustrate the growth of children of both sexes, and an examination of these show the following facts:—(1) Growth is most rapid during the first five years of life; (2) from birth to the age of five years the rate of growth is the same in both sexes, girls being a little shorter in stature and lighter in weight than boys; (3) from five to ten years boys grow a little more rapidly than girls, the difference being apparently due to a check in the growth of girls at these ages; (4) from ten to fifteen years girls grow more rapidly than boys, and at the ages of from eleven and a half to fourteen and a half are actually taller, and from twelve and a half to fifteen and a half years actually heavier, than boys. This difference is obviously due to a check in the growth of boys, as well as an acceleration in the growth of girls incident on the accession of puberty; (5) at fifteen years of age boys again take the lead, and grow at first rapidly, and gradually slower, and complete their growth at about twenty-three years (after fifteen girls grow very slowly, and attain their full stature about the twentieth year); (6) the tracings and tables show a slow but steady increase in stature up to the thirty-fifth year, and a more rapid increase in weight up to the sixtieth year, in males; but the statistics of females are too few after the age of twenty-three to determine the stature and weight of that sex at the more advanced periods of life; (7) the curve of the chest-girth in males shows an increase at a rate similar to that of the weight up to the age of fifty years, but it appears to have no definite relation to the curve of

stature; (8) the strength of males increases rapidly from twelve to nineteen years, and at a rate similar to that of the weight; more slowly and regularly up to thirty years, after which it declines at an increasing rate to the age of sixty years. The strength of females increases at a more uniform rate from nine to nineteen years, more slowly to thirty, after which it falls off in a manner similar to that of males. The curves of strength for the two sexes are not parallel; at eleven years females are weaker than males by 22 lb., at twenty years of age by 36 lb. The maintenance of the stature throughout life is a new and unexpected fact, but it is probably due to the survival of the taller and better developed members of the population, and the elimination by disease or death of the smaller and feebler ones. The loss of stature resulting from the degeneration and loss of tissues, and the stooping position assumed by old people, is more than counterbalanced by the survival of a greater number of individuals who are above the average in height. The uniform increase in the weight and chest-girth throughout adult life also confirms this view. A summary table based on all the observations collected shows the average stature, weight, chest-girth, strength, and span of arms of both sexes from birth to seventy years of age; the relation of these qualities to each other and the factors for calculating the typical proportions of the body at all ages, together with the actual and percentage differences of the two sexes.

Mr. Roberts has introduced the statistics which he published in our columns some years ago, showing that great improvement has taken place in the stature and weight of factory children after an interval of forty years, and has added a table relating to boys in the Friends' School at York, showing that for a period of twenty-seven years the stature has remained stationary, while there has been a slight improvement in the weight during recent years, thus disposing of the popular error that the population of this country is degenerating. In conclusion, the committee observe:—Attention has been called to some of the principal points of interest, but in many respects the tables have been left to speak for themselves; and it is not improbable that a study of them will lead some persons to conclusions differing more or less from those given in this report. The original returns, which the committee recommend may be placed in the charge of the Anthropological Institute for preservation and future examination, comprise many statistics which could not be introduced into this report on account of the time and labour required for their analysis and tabulation. The committee believes that it has laid a substantial foundation for a further and more exhaustive study of the physical condition of a people by anthropometric methods, and that its action will prove it has been useful as an example to other scientific societies and to individuals in stimulating them, as well as directing them, in the methods of making statistical inquiries relative to social questions. The medical officers, managers, or superintendents of many colleges, schools, and charitable institutions have been induced to keep registers of the physical proportions of those under their charge, which will in a few years become valuable records, not only of the physical condition of the inmates of their institutions, but of the sanitary conditions under which they have lived; they will also be available for the further study of the subjects specially treated of in this report.

The appendix contains a specimen of the card used by the committee for collecting facts, a list of the tables published in previous reports, and a list of recent monographs on anthropometry published in England and the United States.

THE REMOVAL OF THE REMAINS OF WILLIAM HARVEY.

THE ceremony of the removal of the remains of William Harvey from the vault in which they have rested since the Fellows of the Royal College of Physicians laid him "lapt in lead" on June 26th, 1657, took place at the Church at Hempstead, in Essex, on Thursday last, October 18th (St. Luke's Day), in the presence of four representatives of the Harvey family, the President, all the office-bearers, and several of the Fellows of the Royal College of Physicians, with many other spectators who had been attracted by the interesting event. The President and Fellows went to Saffron Walden by a special train, which left St. Pancras Station at 1.30 P.M., and on arriving there, proceeded by conveyances to Hempstead Church. After the inspection of the vault in which the remains reposed, the leaden chest containing them was carried into the church by the Fellows, and placed on a bier. A short religious ceremony was then performed by the Right Reverend the Suffragan Bishop of Colchester, assisted by the Vicar, the Rev. R. H. Eustace, and the Curate, the Rev. John Escreet. The remains were then carefully and reverently deposited in the white marble sarcophagus which had been provided for their reception in the Harvey Chapel by the College. The President next placed in the sarcophagus a bound copy of Harvey's Works enclosed in a metal box, and also a scroll giving the following account of the circumstances which led to the proceedings of the day:—"The body of William Harvey, lapt in lead, simply soldered, was laid without shell or enclosure of any kind in the Harvey Vault of this church, Hempstead, Essex, in June, 1657. In the course of time the lead enclosing the remains was from exposure and natural decay so seriously damaged as to endanger its preservation, rendering some repair of it the duty of those interested in the memory of the illustrious discoverer of the circulation of the blood. The Royal College of Physicians, of which corporate body Harvey was a munificent benefactor, and which, by his favour, is the possessor in perpetuity of his patrimonial estate at Burmarsh, Kent, did, in the years 1882–83, by permission of the representatives of the Harvey family, undertake that duty. In accordance with this determination, the leaden mortuary chest containing the remains of Harvey was repaired, and as far as possible restored to its original state; and on this 18th day of October, 1883, in the presence of four representatives of the Harvey family, and of the President, all the office-bearers, and many other Fellows of the College of Physicians (whose names are hereunto appended), was reverently translated from the Harvey vault to this sarcophagus, raised by the College for its reception and preservation."

Colonel LLOYD.
ROSSENDALE LLOYD.
Captain LLOYD, Gren. Guards.
Colonel HARVEY BRAMSTON.

Sir William Jenner, Bart., K.C.B., M.D., President.
George F. Fincham, M.D., Censor.
Sir Andrew Clark, Bart., M.D., Censor.
Frederick W. Pavy, M.D., Censor.
Wilson Fox, M.D., Censor.
Frederic J. Farre, M.D., Treasurer.
Sir Henry A. Pitman, M.D., Registrar.
William Munk, M.D., Harveian Librarian.
William H. Allchin, M.B., Assistant Registrar.
George E. Paget, M.D.
George O. Rees, M.D.
Sir James Risdon Bennett, M.D.
Henry Monro, M.D.
Henry Wentworth Acland, M.D.
Richard Quain, M.D.
Edward H. Sieveking, M.D.
Charles B. Radcliffe, M.D.
William Wood, M.D.
Benjamin W. Richardson, M.D.
William M. Grailly Hewitt, M.D.
Dyce Duckworth, M.D.
Alfred Meadows, M.D.
Richard D. Powell, M.D.
William G. Hunter, M.D.
Augustus B. Shepherd, M.D.
Norman Moore, M.D.

The metal box containing the works of Harvey bore on the upper surface the following inscription:—

GVLIELMI HARVEII
OPERA OMNIA
EDITA
MDCCLXVI.

And on the under surface—

THE COMPLETE WORKS
OF
WILLIAM HARVEY,
DEPOSITED OCTOBER 18TH, 1883.

The scroll, enclosed in a sealed bottle, wrapped also in lead, bore an outer inscription:—

Scroll,
Deposited October 18th, 1883.

After the ceremony the service was closed, and the heavy

lid of the sarcophagus was rolled over the remains, and sealed up for all ages.

Our readers are well aware that in the pages of this journal the history of the remains of Harvey was written on Nov. 30th, 1878, by Dr. Richardson, and was accompanied by several illustrations. They are also conversant with the fact that in the same article the question of the preservation of the remains was very earnestly pressed. Later, after the fall of the tower of the church at Hempstead on January 26th, 1882, the same author once more called attention to the same subject, and concluded his request by bringing it in February before the Royal College of Physicians, who, acting upon it, carried out the design which on St. Luke's Day was brought to its completion.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hackney (Urban).—London has recently been exceptionally healthy (judged by its rate of mortality), and, according to a report just issued by its medical officer of health, Dr. Tripe, the district of Hackney has shown a remarkably clean bill of health. During four recent weeks the annual death-rate in Hackney did not exceed 10·6 per 1000, while the mean rate for the whole of London was not more than 16·6. The district of Hackney includes the parish of Stoke Newington, as well as that of Hackney, and contains an estimated population exceeding 200,000 persons. In the corresponding period of last year the Hackney death-rate was 16·9, against 19·3 in the whole of London. It is beyond doubt that the present satisfactory sanitary condition of London is partly due to the increased activity of the local authorities, induced by the outbreak of cholera in Egypt; and Dr. Tripe states that, as regards Hackney, so much activity had not been shown since 1866, the year of the last cholera epidemic in London. The present low death-rate in the metropolis and in the large English towns is, however, more preeminently due to the moderate autumn temperature, combined with frequent heavy rain, both conditions being conducive to low death-rates at this season of the year. With respect to the comparison of the Hackney death-rate with the mean rate for the whole of London, it is scarcely necessary to point out that the social condition of the bulk of the Hackney population, containing as it does so small a proportion of the poorest classes and so large a proportion of domestic servants, and the age constitution of its inhabitants, are all conducive to a low death-rate. The Hackney death-rate has been satisfactorily low, but it is somewhat hazardous to institute comparison with the rates prevailing in other parts of the metropolis, without taking account of the above-mentioned disturbing elements.

Hastings.—This borough had in 1882 a death-rate of 16·1 per 1000, but, making allowance for deaths amongst visitors, the rate would be only 13·8. The zymotic rate was rather higher than usual—namely, slightly over 2 per 1000, but this was mainly due to an excess of whooping-cough and measles. Scarlet fever was somewhat prevalent, and in connexion with this Mr. Shaw refers to the fact that Hastings becomes one of the public sanatoria for convalescents from that and other diseases, and he implies that persons are allowed to come there for change of air whilst still in an infective state. There is, we fear, too much reason to believe this to be true, and we would point out how important it is that convalescents from this disease should be regarded as infective until all trace of desquamation and abnormal throat-redness have subsided, and that the hair should be specially cleansed from all particles of skin at the end of the desquamative period. The local sanatorium has been extended so as to provide separate accommodation for cases of small-pox, and to increase that available for scarlet fever, of which disease 73 patients were admitted in 1882. New bye-laws have been adopted as to buildings, and they are based upon the model series issued by the Local Government Board. Mr. Shaw, however, thinks that the details as to drain ventilation should have been more explicit. The annotated series of these bye-laws supplies, however, by means of diagrams, all details as to construction that could possibly be needed.

Holborn.—Dr. Gibbon reports the death-rate for this metropolitan district as 18·2 per 1000 during the year ending Lady Day last. Dealing with the subject of syphilis, he records an increase in the number of cases of syphilis and congenital syphilis; but he believes the increase to be more apparent than real, and to be due in the main to increasing accuracy of nomenclature. Taking the whole metropolis, however, he finds a diminution in regard to syphilis and venereal diseases generally; and he attributes the circumstance to the operation of the Contagious Diseases Acts in the naval and military stations of the kingdom. Referring to the recent abandonment of those Acts, he alleges that the women dealt with under them are more liable to contract disease than men; and that since they have elected to follow a calling injurious to the public welfare, there can be no wrong in requiring them to submit to a personal examination, the object of which is to preserve their own health, as also that of the general community. A detailed statement of the actual sanitary work follows, together with certain tables; but otherwise the report has little information as to the sanitary state and progress of this populous and important metropolitan area.

Bromley.—Some excellent regulations as to house connexions with the public sewers have been issued for this district, and the details have been made easily intelligible by means of a series of diagrams prepared by Mr. H. S. Cregeen, the surveyor to the Local Board. This method of illustrating bye-laws and regulations is coming into more general use, and it has the distinct advantage of pointing out to builders and others at a glance precisely what is intended in clauses which are, by reason of their necessary length and complicated wording, not always easily to be understood.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5607 births and 3333 deaths were registered during the week ending the 13th inst. The annual death-rate in these towns, which had steadily declined in the five preceding weeks from 20·0 to 18·5, rose again last week to 20·2. During the quarter ending Saturday, the 29th ult., the death-rate in these towns averaged 19·9 per 1000, against 20·5 and 20·6 in the corresponding periods of 1881 and 1882. The lowest rates last week in these towns were 11·7 in Leicester, 12·8 in Derby, 13·5 in Portsmouth, and 15·2 in Halifax. The rates ranged upwards in the other towns to 26·8 in Salford, 27·2 in Manchester, 29·7 in Newcastle-upon-Tyne, and 32·3 in Preston. The deaths referred to the seven principal zymotic diseases in the twenty-eight towns, which in the five preceding weeks had declined from 763 to 482, were last week 484; they included 171 from diarrhœa, 116 from scarlet fever, 56 from measles, 56 from "fever" (principally enteric), 45 from whooping-cough, 32 from diphtheria, and 8 from small-pox. No death was referred to these diseases in Halifax, and but one in Plymouth; while they caused the highest death-rates in Manchester, Newcastle-upon-Tyne, and Preston. Scarlet fever showed the largest proportional fatality in Cardiff and Leeds; measles in Manchester and Newcastle-upon-Tyne; "fever" in Portsmouth and Derby; and diarrhœa in Hull and Preston. The 32 deaths from diphtheria in the twenty-eight towns included 24 in London and 2 in Bradford. Small-pox caused 3 deaths in London, 2 in Birmingham, 2 in Sunderland, and one in Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals, which had been 60 and 58 on the two preceding Saturdays, further declined to 51 at the end of last week; 5 new cases were admitted to these hospitals during the week, against 9 and 12 in the two preceding weeks. The Highgate Small-pox Hospital contained 10 patients on Saturday last, 4 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the two preceding weeks had been 163 and 191, further rose to 248 last week but were 32 below the corrected weekly average. The causes of 92, or 2·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Leicester, Derby, Bolton, and Preston. The proportions of uncertified deaths were largest in Sheffield, Hull, Wolverhampton, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 20·6 and 17·0 per 1000 in the two preceding weeks, rose again to 20·6 in the week ending the 13th inst.; this rate was 0·4 above the mean rate during the week in the twenty-eight English towns. The rates in the Scotch towns ranged from 17·0 in Edinburgh and 17·1 in Greenock to 23·6 and 23·8 in Dundee and Perth. The deaths in the eight towns included 80 which were referred to the principal zymotic diseases, showing an increase of 16 upon the number returned in the preceding week; 25 resulted from diarrhœa, 21 from diphtheria, 16 from scarlet fever, 10 from "fever," 6 from whooping-cough, 2 from measles, and not one from small-pox. These 80 deaths were equal to a rate of 3·4 per 1000, which slightly exceeded the mean rate from the same diseases in the large English towns. The highest death-rates from these diseases in the Scotch towns last week occurred in Glasgow and Dundee. The 25 fatal cases of diarrhœa corresponded with the number in the preceding week, and were one less than the number returned in the same week of last year; 11 occurred in Glasgow and 7 in Dundee. The deaths referred to diphtheria, which in the two preceding weeks had been 23 and 12, rose again to 21 last week, of which 6 were returned in Dundee, 5 in Glasgow, 5 in Aberdeen, and 4 in Edinburgh. The fatal cases of whooping-cough, which had been 18 and 7 in the two previous weeks, further declined to 6, of which 4 occurred in Glasgow. The 16 deaths from scarlet fever showed an increase upon the number in the preceding week, and included 9 in Glasgow and 4 in Edinburgh. The fatal cases of "fever," which had been 4 in each of the two previous weeks, rose to 10 last week, of which 8 were returned in Glasgow. The 2 deaths from measles showed a further decline from recent weekly numbers, and were both registered in Glasgow. The 97 deaths referred to acute diseases of the respiratory organs in the eight towns showed an increase of no less than 38 upon the number in the preceding week, but were slightly below the number returned in the corresponding week of last year. The causes of 73, or nearly 15 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which in the four preceding weeks had declined from 27·5 to 23·4, rose again to 25·8 in the week ending the 13th inst. The mean death-rate in the city during the quarter ending Saturday, the 29th ult., was 22·8 per 1000, against 16·6 in London and 18·8 in Edinburgh. The 173 deaths in Dublin showed an increase of 16 upon the number in the preceding week; they included 11 which were referred to diarrhœa, 7 to scarlet fever, 4 to whooping-cough, one to diphtheria, one to "fever," and not one either to small-pox or measles. Thus 24 deaths resulted from these principal zymotic diseases, against 29 and 21 in the two previous weeks; they were equal to an annual rate of 3·6 per 1000, while the rate from the same diseases in London was 2·5 and in Edinburgh 3·3. The 11 fatal cases of diarrhœa exceeded by one the number in the preceding week. The deaths referred to scarlet fever, which had been 10 and 7 in the two previous weeks, were again 7 last week. The 4 fatal cases of whooping-cough showed a further slight increase upon those returned in recent weeks. During the first two weeks of the current quarter only one death has been referred to "fever" in Dublin, the average weekly number since the beginning of this year having been nearly 7. The deaths both of infants and elderly persons showed a slight increase. The causes of 30, or more than 17 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Norfolk Regiment: Charles William Doyle, Gent., M.B., to be Acting Surgeon.

ADMIRALTY.—The following appointments have been made:—Surgeon J. S. Logan, M.D., to the *Sphinx*, commissioned; Surgeon W. M. Rae to the *Duke of Wellington*; Mr. A. P. Davis to be Surgeon and Agent at Fowey, vice Mr. E. Stillingfleet White; Fleet Surgeon William Hogarth Adam, to the *President*, vice Leonard Henry J. Hayne.

Correspondence.

"Audi alteram partem."

CASE OF EPILEPSY, WITH TRAUMATIC SKIN LESIONS FOLLOWING THE ATTACKS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of September 15th there appeared a letter entitled "Feigned Skin Disease." As I differ from Dr. Murrell in some respects, I venture to write some notes of the case as related to me by her friend, and as I observed her in the hospital ward.

T. H——, aged fourteen, female, was brought to the out-patient ward of the Westminster Hospital suffering from a number of superficial sores, and fits called epileptic. The account given was that these sores had come out in successive crops—if I may be allowed the term—during the past six months, and that they had always been noticed after the patient had had a fit. The history was as follows:—Her father suffered as a youth from fainting fits and vertigo, but is now quite healthy. Two of his brothers were insane: one died, aged fifty, of softening of the brain; the second has been an inmate of Banstead Asylum for twenty years. The father has a nephew and niece, both epileptic. The mother's brother is an epileptic. The patient was healthy at birth, and, with the exception of measles and scarlet fever, remained so until seven years ago. She then became subject to fits. These fits varied in intensity, in frequency, and in the time of their occurrence. At times she had nine or ten daily, and at other times would be free for two months. They often occurred at night, a sister who always slept with her being awakened by the patient's struggles, though the patient in the morning had no recollection of the attack. A severe fit would begin with a cry, and then the patient would lose her senses, fall to the ground, with her head and eyes turned to the left, and then would follow clonic twitchings of the muscles of her face and limbs, most marked on the left side. As she recovered consciousness there would be foam on the lips, and often the tongue was bitten. They could not say whether the urine was ever voided. Sometimes a series of fits would occur, but of a milder kind. The condition after the attacks, again, varied. At times, she would soon recover herself, and at other times she would be dull and listless, and did not appear to recognise her father and sister. Sometimes her memory would fail her for a day or two. As she became more accustomed to the fits she began to recognise the onset of an attack, and would seek a refuge. This state of things went on till last Christmas, when, for the first time, they noticed in the morning, after a nocturnal attack, the sores for which she sought relief. The patient is a well-developed girl of fourteen, of a sallow complexion, eyes rather deeply set in the head, with an areola round them. Her expression is that suggestive of epilepsy, which is more easily appreciated when seen than described. Her intelligence is good. Pupils are equal, and act to light and accommodation. Special senses are intact, and there is no loss of sensibility or power in any part. All her functions are normal and healthy. On the extensor aspect of her arms, on her cheeks, and on her breast are the sores mentioned, which are already so fully described in the letter of the 15th that I will not enter into further detail. While in the hospital I had an opportunity of observing the fits. The fits I saw were of the petit mal order, and consisted in a loss of consciousness, followed by twitchings of the muscles of her face and arms for a few seconds. Several of these fits occurred in succession. After the attacks had subsided, I addressed her and asked a few questions; but, although she answered at once, she appeared quite unconscious of her surroundings. She failed to recognise several people who were familiar to her, and she did not remember where she was. Her pupils were dilated. There was apparently no loss of sensibility or power in her limbs. She soon became drowsy and slept for a few hours, and then awoke in her right mind. The fits have been observed by the resident officers, and the same condition of imperfect consciousness noticed.

That the fits are epileptic I have no doubt; the strong neurotic inheritance, the description given by the friends, and the fits as they have been seen in the hospital, admit of no other diagnosis. My object in relating the case is that I

believe it to be extremely rare for epileptics to wound themselves, except, so to speak, accidentally. The epileptic delirium, which is sometimes vicarious with the fits, and the similar condition observed after the fits, are well known; and at such times, as Nothnagel says, "the patients will throw themselves on other persons and strike them; or they destroy objects around them; or they wound themselves in a senseless way." Murders and suicides have been committed in this state, and persons have otherwise seriously injured themselves, but there has been no method in their madness. Murders have been done on those dearest to the killers, and suicides committed by those who in their lucid intervals would have been thought in easy, contented circumstances.

The explanation I would suggest is that during the curious half-oblivious state this patient appears in after the attacks there is some irritating sensation, and that she seeks to relieve the annoyance by rubbing or scratching the skin; that it is in response to some feeling of itching, or a feeling which she interprets as itching or furriness, that she so injures herself; the fact that the injuries always assume the same form would seem to support this explanation. Again, in this state she has not so acute a sense of pain as she would naturally have on such severe scratching. It would seem a paradox to say that she feels and yet does not feel; but we know that in the insane a misinterpretation of sensation does occur, or else that sensation is so altered as to give a suggestion of pleasure rather than of pain. My argument, then, is that this girl, unconscious of all her surroundings, not even knowing her father and sister, forgetful of the place in which she actually is, and moreover, as I believe, inflicting these painful wounds on herself, is not at that time sane, though rational enough in the intervals. There have been cases reported of marks and sores self-inflicted by girls suffering from the disease "hysteria," and this case was stated as such in the letter of the 15th. I conclude that by the phrase "feigned skin disease" is meant that the sores are traumatic and self-inflicted; but that title would imply a distinct attempt to mimic disease. If by the term "hysteria" is meant a condition which consciously and intentionally imitates disease, and does so to attract sympathy, such a term is compatible with deliberately self-inflicted injuries, and in such a use I understand the term employed by Dr. Murrell. I can neither agree with such a definition, nor do I admit that this case comes under such a heading. To summarise, I wish to show that, firstly, though I believe the wounds are self-inflicted, they are in answer to some irritation referred to the periphery, and done unconsciously without any intention to feign disease; and, secondly, that the girl suffers from well-marked epileptic attacks, and not from a sham complaint, as I understand to be implied in the letter of Dr. Murrell.

I offer my sincere thanks to Dr. Donkin, physician to the hospital, for kindly allowing me to publish the case.

I remain, Sir, your obedient servant,

CHARLES HEBBERT,

Oct. 8th, 1883. Medical Registrar to the Westminster Hospital

"TREATMENT OF CHOLERA": A NEW METHOD PROPOSED.

To the Editor of THE LANCET.

SIR,—About two months ago I took up my pen to address you on the subject of the treatment of cholera, but relinquished the idea for fear of trespassing on your valuable space. Now that communications under the heading of this letter are well-nigh exhausted, will you, should you deem my letter worthy of a place in your esteemed journal, kindly allow me a small space to mention a method of treatment which has occurred to me, and which I believe might be tried with advantage should cholera again visit these shores? The method I refer to is medication per vesicam. We are all aware of the empty and contracted condition of the bladder, and of the great demand made on the system for its fluids in cases of malignant cholera; and considering the small quantity of fluid we can administer to the sufferer by the mouth or by injection (subcutaneous and intravenous), I think we have in the bladder cavity a means whereby we can supply that deficiency of fluid, and at the same time administer such remedies to the patient as our judgment dictates. I do not believe that in health any great absorption can or does take place; but in cholera I believe it to be otherwise, and that fluid injected into the bladder would be speedily absorbed. Such remedies as chloral hydrate and thymol (strong antiseptics in very dilute solutions) could easily be administered, combined with sedatives (e.g., morphia) or stimulants if necessary, the fluid so injected being first raised to 98° or 99° F.

It is my firm belief that non-irritant fluids could safely be administered by way of the peritoneal cavity; but no one in his senses would attempt such a method without first experimenting on the lower animals (now, alas! in the hands of a favoured few). Should, however, future research enable us to overcome the dangers of injecting suitable remedies into the peritoneal and other serous cavities, we shall then have solved the problem of directly acting on the great lymphatic vessels, and so influencing various septic diseases, which we know to have their origin, by open mouths, in such serous cavities.—I am, Sir, your obedient servant,

G. CARRINGTON PURVIS, M.B., C.M. Ed.

Loughboro'-road, Brixton, S.W., Oct. 9th, 1883.

THE WESTMINSTER GUARDIANS AND DR. ROGERS.

To the Editor of THE LANCET.

SIR,—Accustomed as the British public unfortunately is to strange freaks on the part of our more or less representative bodies, I presume most people will hear with surprise of the treatment of Dr. Rogers by the Westminster Guardians. All right-minded people will sympathise with Dr. Rogers, to whom, doubtless, full justice will be done by the Local Government Board, who will not allow, in the interest of the public service, such a palpable injustice as that a tried and valuable public servant should be dismissed for giving evidence in a Government inquiry.

But there is another and very serious aspect of the case. Dr. Rogers is a strong man and a brave, and has done, and will do, his duty, let who will threaten. But how many weaker men will be scared by the fact that such treatment is possible from giving evidence in future? Henceforth, who ever enters the witness-box will do so with the sword over his head, and unless the right be promptly and abundantly vindicated, it will be difficult to obtain witnesses. Shall English civilisation retrograde to such a point as that?

I am, Sir, yours truly,

Oct. 1883. JAMES MILWARD, M.D.

CASES OF REPUTED CHOLERA IN SLIGO.

To the Editor of THE LANCET.

SIR,—I have been surprised to see in your issue of September 29th a letter from your "own correspondent" in Ireland, stating that two cases of genuine Asiatic cholera had occurred in Sligo. The facts are as follows:—On Wednesday morning, Sept. 19th, I was called to see the man K——, who had been for many weeks previously drinking to great excess. Diarrhœa with vomiting had set in on the previous Monday morning, and when I saw him cramps were superadded, but the other symptoms mentioned by your correspondent were not then fully developed. Dr. MacDowel kindly saw the case with me without delay, and after consultation we deemed it advisable to have him at once removed to hospital under Dr. Murray's charge, as he could have no care in his own wretched home. We looked on the case as one of aggravated English cholera brought on by unwholesome food in a constitution ruined by drink and predisposed to the disease. Perhaps I should mention that this man had suffered from similar attacks on previous occasions, in one of which I attended him some years ago; and that although stated to be a quay porter he had not recently been employed as such. The second case referred to by your correspondent was a man named D——, who was employed on Thursday, Sept. 20th, to disinfect and limewash the house lately occupied by K——. He was liberally paid for this duty, and so drank heavily for two days afterwards, showing no signs of illness until early on Saturday morning, after eating a supper composed of tea, hot sodden soda-cake, potatoes, porter, and buttermilk. Soon after this he was attacked by diarrhœa and vomiting, but my aid was not sought until several hours after the attack set in. I immediately asked Drs.

MacDowel and Palmer to see the case with me; we saw him frequently during the day, but our treatment was unavailing, and he died the following morning. He suffered little from cramps, and had bilious evacuations up to the time of his death. This man was frail in body, and, strange to say, was attended by Dr. Palmer some time ago for a similar attack brought on by drink. I should also mention that the five children, wife, and mother left by K——, have not ceased to occupy the room in which he died; neither has D——'s wife, who attended on him during his illness, contracted the disease. The locality is a crowded one, and not in the best possible sanitary condition, yet no fresh case has arisen, although it is now three weeks since the first case occurred.

I am, Sir, yours faithfully,

JOHN LAIRD,

Wine-street, Sligo, Oct. 10th, 1883. Medical Officer of Health for Sligo.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

DARLINGTON HOSPITAL AND DISPENSARY.

THE memorial stones of the new hospital and dispensary at Darlington were laid last week. The ceremony attracted much popular attention, there being some 2000 persons present. The subscriptions for the hospital now amount to £9400, which, however, is not sufficient to cover the cost of erecting the building and providing for its future maintenance. The matter has been taken in hand by the Mayor and Town Council, and, with the aid of the trades societies and the public generally of the district, the placing of the new hospital on a solid financial basis should not long remain a matter of doubt.

HARTLEPOOLS HOSPITAL EXTENSION.

It is proposed to enlarge the Hartlepools Hospital, which is situated near the Town Moor, in the old borough of Hartlepool. The hospital is at the extreme east of the Parliamentary borough, whilst most of the great works where labour is largely employed are at a considerable distance. The men in these works contribute handsomely to the hospital, and it is pointed out with some force that before the present premises are enlarged it would be well to consider the case of the wounded who, in case of severe accident, have to be carried from the west end of the borough, a distance of from one to three miles, to the hospital. What is needed is a cottage hospital near to the works, which could be used as an accident ward and as an adjunct to the hospital, and could be worked by its staff. It is pointed out by the press that the tendency of late in the provision of these works of mercy is to spend vast sums on the buildings, which require a continuous effort to maintain, while comfort, utility, and economy, as well as greater safety for life and limb, at least in surgical cases, might be gained by adopting the cottage system.

"BONE-SETTING" AND "CHARMING" IN DURHAM COUNTY.

At the last meeting of the Lanchester Board of Guardians, the question of "bone-setting" cropped up in a curious manner. A small beerhouse-keeper, who also worked by carrying coals with a cart and horse from the colliery, applied for relief for his mother, who was old and infirm, and dependent on him for support. This, he stated, he was unable to give, owing to a misfortune in dislocating his shoulder a few weeks ago. The following conversation took place on the matter. The chairman: "Have you had a doctor to examine the shoulder?" Applicant: "No; but I have been to a bone-setter, and I have visited a 'charmer,' to whom I paid 3*s.* 6*d.* to have my shoulder 'charmed.'" (Laughter.) "And did that cure you?" Applicant (indignantly): "No, sir; it's a regular imposition. The man wants advertising, he does." (Great laughter.) A guardian remarked: "I should think the person who was foolish enough to believe in such nonsense and paid his money ought to be advertised." Eventually it was agreed to allow the man a small weekly sum for his mother until such time as he was able to resume work.

Newcastle-on-Tyne, Oct. 15th, 1883.

THE Town Council of Warwick has decided to serve notices, under the Rivers Pollution Act, upon the Local Board of Kenilworth and the Town Councils of Leamington and Coventry, for polluting the river Avon.

SCOTTISH NOTES.

(From our own Correspondent.)

ABERDEEN HOSPITAL FOR INCURABLES.

DR. EDMOND of Kingswells, who may now be looked upon as a never-failing friend of the Aberdeen charities, has intimated a purchase by him, on behoof of the above hospital, of feu-duties amounting to over £50, besides occasional casualties amounting to £53. The new building will thus be relieved of feu-duty, and the balance devoted to general purposes.

ABERDEEN UNIVERSITY COUNCIL.

The meeting of this body, held on Oct. 10th, was devoted to the consideration of a report by the committee appointed at the last meeting anent the Universities (Scotland) Bill. Briefly, the following are the objections raised to the Bill:—1st. The sum allowed in perpetuity is inadequate. 2nd. The disestablishment of the universities is objected to. 3rd. The threatened extinction of St. Andrews is deplored. 4th. Draft rules, statutes, &c., sent by the University Court to the Commissioners should first be submitted to the Senatus and Council; and that after the Bill becomes law a similar method should be adopted before representations are made to the Committee of Council on Education. 5th. That the standard of admission to the various faculties should be made the same in all the universities. The report was unanimously agreed to, with the rider that no Bill providing that any sum should be in full discharge of all claims of the universities would be satisfactory or acceptable. The report and the concluding representation will be laid before the University Court. A motion was also passed urging that the Council should have enlarged powers.

PERTHSHIRE MEDICAL ASSOCIATION.

In mentioning the annual meeting of this Society in my notes last week an interesting exhibition of cases was omitted. Dr. H. W. Laing (Bridge of Earn) showed two children, a brother and sister, who suffered from retroversion of the bladder and epispadias. He showed drawings of the parts as they appeared at birth, and also a preserved specimen of a third case which had come under his care, the child in whom it occurred having died of bronchitis when a few months old (*Edin. Med. Jour, 1878.*) The rarity of such cases had induced him to show them to the Society. In all the cases the hypogastric portion of the abdominal wall, the symphysis pubis, and the anterior wall of the bladder were absent. The bladder formed a hernial protrusion, filling up the gap and exposing its mucous lining, on the sides of which the ureters opened and allowed the constant escape of urine. The urethra in all the cases was in a condition of epispadias. In the males, the penis was opened out along its upper surface, and lay as a flattened appendage between the projecting bladder and scrotum. In the female, the mons veneris was divided and appeared as two projections below the bladder.

HOSPITAL ACCOMMODATION FOR FEVER CASES AT DUNDEE.

Dr. Anderson, medical officer of health for Dundee, has just presented to the Police Commission, as local authority, an interesting report, for the purpose of showing the necessity of additional hospital accommodation for fever cases. It appears that during the past year there were 2040 cases reported under the recent Act, and that in dealing with this number only forty-five beds were available, so that there were but 147 cases removed to hospital. A large number (1227) of the above were suffering from measles, and, excluding these, Dr. Anderson points to the enormous proportion of sickness and death met with in houses of one or two rooms. Including scarlet, typhus, and typhoid fevers, and diphtheria, there were in all 845 cases, and of these 626, or 74 per cent., were in these necessarily crowded houses; the total number of deaths was 97, and of these 78, or 80·4 per cent., were similarly housed. Adding to these the 92 deaths from measles we have a total of 189 deaths, and of these 170, or 89·94 per cent., occurred in houses of one room. Using his accurate local knowledge of the housing of the people of Dundee, Dr. Anderson states that during last year infectious diseases were three times as prevalent and nine times more fatal in houses such as we have mentioned; and when we hear that in these the infected person has but 332 cubic feet, or at most 385 cubic feet of air space, we need not wonder either at the prevalence or death-rate. If the

death-rate could be reduced to that now found among the classes occupying houses of three or more rooms, the annual saving of live would amount in Dundee to 127, and probably 1540 persons would be saved from sickness. The first step towards this desirable end is the provision of means for isolation in hospital. As Dr. Anderson pertinently asks, "Of what use is it to know when infectious disease exists if the necessary measures are not adopted to eradicate it?" The demand made in these circumstances seems most moderate. A hospital containing 54 beds, at an estimated cost of £4000 and an annual outlay of £735, would, in view of the direct loss to the community from avoidable sickness and death, and leaving out of sight higher considerations, prove a profitable investment; and we hope ere long to hear that the building is being proceeded with.

Obituary.

ROBERT HAROLD AINSWORTH SCHOFIELD, M.A., M.B. OXON., B.SC. LOND., F.R.C.S.E.

MR. SCHOFIELD, who died on August 1st at the Mission Station, where he laboured as a medical missionary, Tai-Yüen-Fu, in the Province of Shansi, North China, was third son of the late Robert Schofield, Esq., of Heybrook, Rochdale. He was born in 1851, and was educated at the Old Trafford School, near Manchester, and subsequently at the Owens College, Manchester, where he obtained the Victoria Scholarship in Classics, and was elected an Associate of the College, after taking the degrees of B.A. and B.Sc. in the London University. He thus obtained an exhibition to Lincoln College, Oxford, and began residence there in October, 1870. He graduated with first-class honours in Natural Science, and afterwards filled an appointment in the Museum of Comparative Anatomy under the late Professor Rolleston. Gaining the Open Scholarship in Natural Science at St. Bartholomew's Hospital, London, he began there in 1873 the study of that profession to which he had always intended to devote himself as his work in life. He so vigorously prosecuted his work that he won successively the Foster Scholarship in Anatomy, the Junior and Senior Scholarships, in their respective years, the Brackenbury Medical Scholarship, and the Lawrence Scholarship and gold medal. About this time he gained the Radcliffe Travelling Fellowship in Natural Science at Oxford, and, having graduated, he proceeded to Vienna and Prague to follow his studies there. On the war between Turkey and Servia breaking out, he offered his services as a surgeon to the Red Cross Society, and was put in charge of the hospital at Belgrade during the campaign, and the next year he served in a like capacity in the Turkish army during the conflict between that kingdom and Russia. On the expiration of his Radcliffe Fellowship he returned to St. Bartholomew's Hospital, and filled successively the appointments of house-surgeon and house-physician.

It was now that he announced his intention to devote himself to medical missions abroad; and to that resolve, in spite of all opposition, he steadfastly adhered. In the spring of 1880, after his marriage, he embarked for China, having associated himself with the China Inland Mission, under Mr. J. Hudson Taylor, M.R.C.S., as one of their missionaries in that country. He resided first at Cheefoo, but later on it was decided that he should proceed to Tai-Yüen-Fu, in Shansi, in the far North-West, and to this spot he went in January, 1881. The cause of his death was typhus fever.

Mr. Schofield was respected by all who knew him. The charm of his personal character was very great; transparent simplicity of thought and speech, a gentleness and amiability almost feminine, and a power of sympathy that was practically unbounded, were united to abilities of the highest order, a clear judgment, and a determination of unswerving firmness.

THE Gilchrist Scholarship of £50 at the recent Matriculation Examination of the London University has been gained by Mr. P. J. Duncan, who has also obtained the Propert medal and prize of £20 and the senior scholarship of £15 from Epsom College, and a free medical education at Charing-cross Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council, held on Thursday last, the following letter from Mr. Richard Owen, acknowledging the award of the honorary medal of the College, was received and entered on the Minutes:—

Sheen Lodge, Richmond Park, 17th August, 1883.

MR. PRESIDENT,—I have the honour and pleasure to acknowledge the reception of your obliging letter, notifying to me that at a meeting of the Council of the Royal College of Surgeons of England the honorary medal of the College was awarded to me by a unanimous vote. My most respectful and grateful acknowledgments are due to the President and the Council for this truly acceptable and encouraging mark of their approbation. But my obligations are greater and of longer standing. To the College I owe the appointments which have made the pursuits most congenial to my tastes a duty, and at the same time have supplied the best means and opportunities of fulfilling it. In whatever degree, therefore, I may have contributed to the advancement of biology, I can only regard myself as instrumental, in such measure, in carrying out the objects which the Royal College of Surgeons had in view in accepting the important trust of the Hunterian Museum, and which the College has ever since most strenuously promoted.

I have the honour to be, Mr. President,
Yours most faithfully and obliged,
RICHARD OWEN.

John Marshall, F.R.S.,
President of the Royal College of Surgeons.

A petition, signed by nearly four hundred Fellows of the College, was laid before the Council, urging the Council to devise some scheme by which provincial Fellows might be able to vote at the College elections without the necessity of appearing in person. This matter was, however, already under the consideration of the Council (see THE LANCET, June 16th, p. 1071, July 14th, p. 83, and Aug. 11th, p. 261). An interesting memorandum drawn up by the President, relating to a proposed new complete catalogue of the library of the College, was presented. The document shows that the library of the College contains at the present time 39,197 vols., which comprise 15,353 independent works, and 39,753 tracts, pamphlets, essays, reports, and theses. The first complete catalogue was made in 1831, when the library consisted of only about 11,000 volumes. Subsequently five supplementary catalogues were printed—viz., in 1840, 1849, 1853, 1855, and 1860. Since the last-named year between seven and eight thousand additions have been made to the collection. The total cost of a new catalogue, making allowance for certain extra expenses, would be about £450, the payment of which would be spread over a year or more. It may be added that it is now nearly twenty-three years (1860) since any similar expenditure has been demanded from the College funds.

THE HIND FUND.

THE following additional subscriptions have been received and paid to the account of the "Hind Fund" at Messrs. Coutts' Bank:—

Sir W. Jenner, Bart.	£5	5	Timothy Holmes, Esq.	£2	2
Sir E. Saunders (additional donation) ...	3	3	Dr. Wilson Fox	2	2
Dr. Semple	3	3	J. Gay, Esq.	1	1
Dr. R. Quain	3	3	Dr. Walsh	1	1
Sir Spencer Wells, Bt.	2	2	— Allard, Esq.	1	1
Dr. R. Liveing	2	2	Dr. Augustus Brown..	1	1
Professor Thane... ...	2	2	J. R. Walker, Esq. ...	1	1
			Irish Pupil	1	0

Subscriptions may be paid to Dr. Richardson, F.R.S., (chairman), 25, Manchester-square; John Tweedy, Esq., F.R.C.S., 24, Harley-street, Hon. Treasurer; A. J. Pepper, Esq., F.R.C.S., 122, Gower-street; and T. Wakley, jun., Esq., L.R.C.P., 96, Redcliffe-gardens, Hon. Secretaries; or to Messrs. Coutts & Co, Strand.

Medical News.

APOTHECARIES' HALL. — The following gentleman passed the examination in the Science and Practice of Medicine, and received a certificate to practise, on Oct. 11th:—

Bryceson, Ebenezer, Shooter's-hill, Kent.

COLLEGE OF PHYSICIANS IN IRELAND. — At the examinations held during October the following candidates obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—William George Butler, John St. Leger Clarke, Constance Verney Fawckner Hitchcock, Francis Octavius Hodson, Jeremiah Thomas Martin, Alphonsus William Moloney, Thomas Joseph O'Donnell, William Langford Smyes.

MIDWIFERY.—John St. Leger Clarke, Thomas Farrelly, William Gordon Hanna, Constance Verney Fawckner Hitchcock, Francis Octavius Hodson, James Macpherson Lawrie, William Nicholson McWilliam, Alphonsus William Moloney, Thomas Joseph O'Donnell, John Wilgar Taylor.

A special examination was held in September, when the undermentioned gentleman obtained the licences in Medicine and Midwifery:—

Robert Wright.

The following Licentiates have been recently admitted Members:—

Edward Bennett.	O'Connell J. Delahoyde.
Andrew R. Cowell.	George Henry Ormsby.
William Crozier.	Espine C. R. Ward, A.M.D.

UNIVERSITY COLLEGE.—The third annual dinner of the pupils of the Hygienic Laboratory attached to this College took place on Thursday at the Grosvenor Gallery. Professor Corfield presided, and there was a large attendance of past and present pupils.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—By an oversight on the part of the secretary of the Society, the names of the newly elected officers were incorrectly given in our last. The President is Dr. A. Forsyth; the Vice-Presidents are Mr. John Marshall and Dr. R. Carrington.

KING'S COLLEGE, LONDON.—The Entrance Scholarships and Exhibitions have been awarded as follows:—Warneford Scholarships: J. Penny, H. C. Addison and H. B. Osburn (æq.) Sambrooke Exhibitions: H. P. Ward and J. Penny. Science Exhibitions (Clothworkers'): R. B. Anderson, C. H. Wordingham, E. W. Davies and E. Ridewood (æq. prox. acc.)

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting of the above Society, held in the Faculty Hall, St. Vincent-street, on the 5th inst., the following gentlemen were appointed office-bearers for the session 1883-84:—President: Dr. W. T. Gairdner. Vice-Presidents: Drs. Alex. Robertson and Hugh Thomson. Council: Drs. Robert Forrest, Lapraik, D. Maclean, J. C. Woodburn, W. Whitelaw (Kirkintilloch), W. A. Wilson (Greenock), R. Cowan, and J. A. Lothian. Secretaries: Drs. W. L. Reid and J. W. Anderson. Treasurer: Dr. Hugh Thomson.

THE ALLEGED DEATH FROM OAKUM-PICKING.—On Monday last Dr. Bridges, inspector of the Local Government Board, held an inquiry into the circumstances attending the death of John Simmonds, an inmate of the workhouse, St. George's-in-the-East. Medical evidence of a somewhat conflicting character was adduced, which, however, tended to show that the oakum shed was fairly ventilated, and that the task allotted to the deceased was not heavier than that which a man in average health could without difficulty accomplish.

HULME DISPENSARY.—The report read at the recent annual meeting of this institution showed that the receipts from patients during the past year amounted to £200 15*s.* 4*d.*, and that the total expenditure of the institution had been £659 18*s.* 9*d.* Allusion was made to a plan which has been for some time under consideration, for establishing a cottage hospital in Moss Side in connexion with the dispensary, and it was urged that the immense population of Hulme and Moss Side would be largely benefited by the existence of such an institution.

PEEL-GROVE CEMETERY.—A public meeting, convened by the Watch Committee of Bethnal-green, was held on the 11th inst. to protest against an alleged attempt to build on this cemetery. It was stated that the bodies which are buried in it have not, owing to the dampness of the site, yet decomposed, and that during the cholera epidemics of 1849 and 1854 there were often as many as fifty funerals per day. It is estimated that 16,000 bodies are interred in it. A memorial to the Home Secretary was adopted, praying that an Order in Council, dated July 7th, 1868, requiring those who have the care of the cemetery to have so much of the ground as is not occupied by existing buildings, monuments, and gravestones, covered with "living vegetation," be carried out.

DIPHTHERIA IN CANTERBURY.—At a meeting of the Canterbury Town Council on the 10th inst. the medical officer of health reported an outbreak of diphtheria in the city. The medical officer stated that he believed there were cases in the city which had not come under his notice, owing to the want of compulsory registration of infectious diseases. If there had been a hospital for infectious diseases in Canterbury, and the first case had been isolated, the probability was that the disease would not have spread in the way that it had done.

UNIVERSITY OF CAMBRIDGE.—At a congregation on Oct. 11th, the following were appointed Examiners:—First M.B. Examination: Mr. W. Garnett, St. John's; Mr. S. H. Vines, Christ's; Mr. M. M. Pattison Muir, Gonville and Caius. Second M.B. Examination: Dr. A. M. Marshall, St. John's; Dr. W. H. Gaskell, Trinity; Mr. J. Shuter, Corpus Christi. Third M.B. Examination: Mr. J. Matthews Duncan, Aberdeen; Dr. Sturges, Emmanuel; Mr. C. Handfield Jones, St. Catharine's. Medical and Surgical Degrees: Mr. J. N. C. Davies Colley, Trinity; Dr. Joseph Lister, Dublin.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The annual meeting of the above Society was held in the Society's rooms on the 11th inst., when the following gentlemen were elected office-bearers for the session 1883-84:—President: Robert Park, M.D. Vice-President: Alex. Napier, M.D. Treasurer: Edward McMillan, L.R.C.S. Edin. Secretary: David Tindal, M.B., L.F.P.S.G. Editorial Secretary: J. Stewart Nairne, L.F.P.S.G. Seal Keeper: Thos. F. Gilmour, L.R.C.P. Edin. Court Medical: J. Barras, M.D., Convener; James Dunlop, M.D.; Thos. Lapraik, M.D.; John Gardner, M.D.; John Barrie, M.D. Ordinary Members of Council: Hugh Miller, M.D.; A. Turnbull Smith, M.B.C.U.; Alex. Patterson, M.D.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of the above Society was held at the rooms of the Royal Medical and Chirurgical Society on Oct. 10th. The President, Sir George Burrows, Bart., was in the chair. The attendance of directors was unusually large. One new member was elected. Applications for grants were considered from fifty-seven widows, five orphans, and three recipients of relief from the Copeland Fund; and it was resolved to recommend that a sum of £1217 should be distributed among them in January next. There were no fresh applications for relief. The Christmas present, which has now been given for many years, was again voted, the funds admitting the same sums as last year to be granted to the widows and orphans now in receipt of grants—viz., £5 to each widow, £2 to each orphan, and £4 to the three orphans on the Copeland Fund, in all a sum of £307.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BUSH, J. D., F.R.C.S., has been appointed Clinical Assistant to the Birmingham Borough Asylum.

CHALMERS, GEORGE, M.B., C.M., has been appointed Assistant Aural Surgeon to the Newcastle-on-Tyne Dispensary.

CHAMPNEYS, CHARLES THORNTON, L.R.C.S.Ed., has been appointed Medical Officer for the Cheriton Fitzpaine District of the Crediton Union.

COLEMAN, MATTHEW OWEN, M.D.Aber., M.R.C.S., has been re-appointed Medical Officer of Health for the Surbiton Urban Sanitary District.

EVANS, WILLIAM, L.R.C.P.Ed., M.R.C.S., has been reappointed Medical Officer of Health for the Anglesea and Holyhead Rural, and the Beaumaris and Holyhead Urban, Sanitary Districts.

GLENDINNING, JAMES, M.D., F.R.C.S., has been appointed Medical Superintendent to the Joint Counties Asylum, Abergavenny, vice D. M. McCullough, M.D., resigned.

GRIFFITHS, GRIFFITH, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Workhouse, Pontardawe Union.

HAWKYARD, ARTHUR, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Leeds Union.

JONES, WILLIAM MAKEIG, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Swinton Urban Sanitary District, vice Blythman, resigned.

LONDON, JOHN A., M.B., C.M.Ed., has been appointed Medical Officer for the First District of the Coventry Union.

MACKENZIE, G. HUNTER, M.D., has been appointed Surgeon to the Eye, Ear, and Throat Hospital, Cambridge-street, Edinburgh.

MALCOLM, JOHN D., M.B.Ed., M.R.C.S., has been appointed Assistant Medical Officer to the North-Western District (Hampstead Fever) Hospital, Haverstock-hill, N.W.

MURRAY, C. S., L.R.C.S.E., L.S.A.Lond., has been appointed Resident House-Surgeon to the Western General Dispensary, Marylebone-road, vice J. Knight, resigned.

NEALE, A. J., M.B., C.M.Ed., has been appointed Honorary Surgeon to the Hulme Dispensary, vice A. Watson, M.D., resigned.

NELIS, WILLIAM F., L.R.C.P.Ed., has been appointed Senior Assistant Medical Officer to the Joint Counties Asylum, Abergavenny, vice J. Glendinning, M.D.

NUNN, P. W. GOWLETT, L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Bournemouth Urban Sanitary District.

PERN, ALFRED, L.R.C.P.L., F.R.C.S.Eng., has been reappointed Medical Officer of Health for the South Stoneham Rural Sanitary District.

RICHARD, DAVID T., M.B., C.M.Ed., has been appointed Medical Officer for the Western District of the Corwen Union.

ROSS, J. MAXWELL, M.B., has been appointed Surgeon to the Eye, Ear, and Throat Hospital, Cambridge-street, Edinburgh.

STEIN, CHARLES GUTHRIE, M.B., C.M.Ed., M.R.C.S., has been appointed Medical Officer for the Third District of the Mansfield Union.

THOMPSON, ABRAHAM, M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Ulverstone Rural Sanitary District, vice Page.

THURSTON, EDGAR, L.R.C.P., has been appointed Curator of the Anatomical Museum, King's College, London.

WHITGREAVE, VINCENT, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Sheffield Urban Sanitary District, vice Hime, appointed to Bradford.

WILLOUGHBY, A. H., M.R.C.S., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital.

Births, Marriages, and Deaths.

BIRTHS.

BALLARD.—On the 9th inst., at Walford House, Smarden, the wife of Philip Ballard, M.R.C.S., L.R.C.P., of a daughter.

COLLINGRIDGE.—On the 9th inst., at St. John's, S.E., the wife of William Collingridge, M.A., M.D., of a son.

GREENWOOD. — On the 17th inst., at 178, Cold Harbour-lane, Camberwell, S.E., the wife of A. Greenwood, L.R.C.P.Lond., of a daughter.

PINKERTON.—On the 13th inst., at Southport, the wife of Charles Pinkerton, M.D., of a son.

TAMPLIN. — On the 15th inst., at Royal-road, Ramsgate, the wife of Charles H. Tamplin, M.R.C.S., of a son.

MARRIAGE.

HARRIS. — CAMPBELL.—On the 4th inst., at the Cathedral, Calcutta, George Francis Angelo Harris, M.R.C.S., L.R.C.P.E., H.M. Indian Medical Service, youngest son of General Harris, B.S.C., to Alice, third daughter of Col. A. E. Campbell, B.S.C., Deputy Commander Sibsagur, Assam, and granddaughter of the late General J. Campbell, Colonel of the 97th Regiment.

DEATHS.

FASKEN.—On the 11th inst., at Fairholme-road, Baron's Court, West Kensington, William Fasken, M.D., Deputy Inspector-General of Hospitals and Fleets (Retired), in his 64th year.

HUGHES.—On the 6th ult., at Colombo, Ceylon, James Sheridan Hughes, M.D., H.M. Emigration Service.

LENEY.—On the 11th inst., at Bentinck-terrace, Regent's-park, George Leney, M.R.C.S., L.S.A., late of Maidstone, aged 71.

OSBORN. — On the 13th inst., suddenly, John Osborn, M.D., F.R.C.S., of Longdown Lodge, Sandhurst, late of Bitterne, Southampton.

SANKEY.—On the 9th inst., at Boreatton Park, Salop, Ethel Annie Octavia Sankey, aged sixteen months.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Oct 18th, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 12	30·08	E.	52	50	..	58	50	..	Overcast
,, 13	30·12	E.	48	48	84	60	45	..	Foggy
,, 14	29·88	S.W.	59	55	95	63	48	..	Fine
,, 15	29·77	S.W.	52	51	97	61	49	·37	Cloudy
,, 16	29·44	S.W.	57	51	94	62	50	·35	Cloudy
,, 17	29·45	W.	56	52	96	61	52	·03	Cloudy
,, 18	29·98	W.	50	45	89	55	44	·12	Fine

Medical Diary for the ensuing Week.

Monday, Oct. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, Oct. 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Ballot for Election of Secretary.—Dr. Ferrier, "On the Progress of Knowledge on the Physiology and Pathology of the Nervous System."

Wednesday, Oct. 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—8 P.M. Specimens will be shown by Mr. Poland. Mr. M'Carthy: (1) "On a Case of Aneurism of the Sciatic Artery;" (2) "On Cases of Imperforate Anus."—Mr. Charters J. Symonds, "On the Reliable Signs of Fracture of the Neck of the Femur."

Thursday, Oct. 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Oct. 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8 P.M. Dr. James Cantlie, "On Cholera."

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Bastian: (1) "On a Case of Rupture of a large Aneurism in the Left Corpus Striatum, with Intra-ventricular Hæmorrhage, and extreme lowering of Rectal Temperature;" (2) "On a Case of Apoplexy in a Boy aged fifteen, with Intra-ventricular Hæmorrhage, Convulsions, and Death in four hours."—Dr. Althaus, "On a Case of Syphilitic Tumours of the Cerebral Membranes."—Mr. Golding Bird, "On a Case of Dislocation of the Jaw, reduced after eighteen weeks."—Mr. G. R. Turner, "On a Case of Wound of the Plantar Arch; Secondary Hæmorrhage on the thirteenth and sixteenth days following the Injury."—Living Specimens at 8 P.M.: A Case of Aphonia following a Head Injury, by Mr. G. R. Turner.

Saturday, Oct. 27.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEDICAL ETIQUETTE.

Dr. W. H. Arthur sends us the following letter, which sets forth professional behaviour in a way that requires explanation. We are not clear that Dr. Arthur would not have done better, in the first instance, in seeking a personal interview with Mr. Hart. Be this as it may, Dr. Arthur is entitled to an answer of some kind or to the publication of the letter. We shall be glad of course to publish Mr. Hart's version of matters in dispute between him and Dr. Arthur, who alleges that in a case previous to that detailed in the letter Mr. Hart was called to a patient of his in his (Dr. Arthur's) absence, and refused either to give it up or to meet him in consultation:—

"60, Grand-parade, Brighton, Sept. 28th, 1883.

"Sir,—You were accidentally, in my unavoidable absence, called on by my patient, Mr. Cook, last night. For your attention I should certainly have thanked you were it not that I am informed that you have repeated your visit on three occasions this morning without being sent for, although you had been repeatedly told that he was my patient, and that he and his family had been attended by me for years. I may mention here that Dr. Stephens, also Mr. Blaker, surgeon, were similarly called on by my patient whilst in his erratic state of mind, but they very properly, and in strict accordance with professional etiquette, declined to visit, on learning that I was already in attendance. I am informed, moreover, that you seemed to beg to be allowed to continue your attendance upon my patient, to my professional disadvantage, and that you also sent, unsolicited, a keeper to take charge of my patient. The matter, as reported to me, may be susceptible of explanation, or it may take another aspect from that in which it now appears to me, if your conduct has not been misrepresented; and if you have no explanation or apology to make me, I shall most certainly place the matter before the medical profession through the press.

"I remain, Sir, yours truly,

"W. H. ARTHUR, M.D., M.R.C.S.L., L.M., L.S.A.

"To Mr. John Eugene Hart, Surgeon, 4, Gloucester-place, Brighton."

*** With the permission of the writer, we have omitted from the above letter certain portions not material to the issue raised.—ED. L.

Semper Hilaris.—We are of opinion that a medical man asked to meet a brother practitioner in consultation should not decline, unless there is some obvious personal or professional reason for doing so. At the same time, we gather that there was nothing in the method of our correspondent's doing so in this case which justifies the extreme resolution taken by the gentleman he was asked to meet.

In Ardua Tendit.—We should say that if, after remonstrance, such advertisements were continued, professional intercourse should cease.

J. W. should consult his medical adviser. We do not prescribe.

"THE CHEMICAL LUNG."

To the Editor of THE LANCET.

SIR,—Will you kindly inform me if Dr. Neale's "chemical lung" has been found practically useful in rendering agreeable the air in small hospital wards? If the expense of charging chemicals is high regarding a modest institution? And who is agent for the sale of them in London?

I am, Sir, your obedient servant,

Clareville, Oct. 15th, 1883. E. A. STEPHENSON, M.K.Q.C.P.I.

*** The only exhaustive experiment hitherto made has been in the Mission-room, Lisson-grove. The experiment at Aden Hospital was, we believe, most satisfactory. Mr. Dodd, 57, Burton-crescent, will supply every information. The cost of charging would not exceed 1s. a week for an ordinary small hospital ward, and would supply an atmosphere free from all impurities, chemical and organic.—ED. L.

A USEFUL INSTITUTION.

THE thirty-eighth annual report of the work done in connexion with the National Refuges and Training Ships for Homeless and Destitute Children in the seven establishments in the metropolis and neighbourhood, and in the training ships *Arethusa* and *Chichester* at Greenhithe, has been published. From it we gather that during the year 1882, 523 boys and girls were admitted to the ships and homes, and 479 left the care of the committee, some for a seafaring life, and others for Canada and situations at home. The total receipts for the year amounted to £23,114 16s., and the expenditure to £26,147 15s. 7d., leaving a balance of expenditure over income of £3032 19s. 7d. About 1000 children are now dependent on the committee, and subscriptions are earnestly desired to aid what appears to be a really good and useful work.

DEATH CERTIFICATES.

To the Editor of THE LANCET.

SIR,—During the time a friend of mine was away on his summer holiday I took charge of his practice. One of his patients, a gentleman residing in the Netherwood-road, Kensington, died on Sunday, Sept. 9th. I had previously seen him on Tuesday, the 4th, and then warned him of his approaching end, and told his relatives that I should not come and see him again unless I was sent for. On Tuesday, the 11th, I went out of town. On my return some time after, I learnt that my certificate of death had been refused, as I had not seen the deceased for five days before his death, although it was stated in the certificate that the duration of the disease (typhoid fever followed by lung disease) was five months; at the same time the relatives were informed that the case would have to be reported to the coroner, and that an inquest must be held. The relatives went from the registrar's office to the coroner, Mr. Diplock, who at once said there was not the slightest reason for refusing the certificate, and wrote to the registrar—at least to the deputy-registrar, Mr. Croft being away—to that effect.

Would you kindly inform me what is the law with regard to this matter of the time a medical man in signing a certificate should have seen a patient before death? There is nothing stated in my certificate book, nor do I know where to look for the law on the subject.

I am, Sir, yours faithfully,

Duchess-street, W., Oct. 13th, 1883. PUGIN THORNTON.

*** There can be no doubt that the registrar, according to the facts as above stated, exceeded his duty, and indeed acted in contravention of his official instructions, in refusing the certificate above referred to. The Registration Act simply insists that the registered practitioner shall have been in attendance during the last illness of the deceased, as a condition necessary to confer the power of giving a legal certificate. The Registrar-General, in accordance with the Registration Act, instructs his registrars to accept all certificates given by registered medical practitioners who have been in *bonâ-fide* attendance during the last illness.—ED. L.

Mr. Roe (Patricroft).—The matter must be left for the author to decide.

Mr. Herbert Whitley.—Professor Liveing, Cambridge.

"ORTHOPÆDICS IN ITALY."

To the Editor of THE LANCET.

SIR,—Allow me to add a few remarks to your annotation on the above subject in the last issue of THE LANCET. I paid in 1877 a long visit to the School for Rickety Children in Milan (Pio Istituto dei Rachitici in Milano), which is under the able medical superintendence of my friend, Dr. G. Pini. The object of this school and of the similar one at Turin is to have rickety and deformed children under regular daily treatment for some years during school life. The afflicted children are fetched daily by omnibuses from the various public schools, and returned the same evening to their homes. At the School for Rickets a portion of each day is devoted to special orthopædic treatment by "medical gymnastics," rubbing and splints where necessary; while the rest of the day is devoted to lessons under certificated teachers, and to out-door games in a spacious playground. The children are also fed at this school, and receive the diet most suitable for rickets—viz., plenty of milk, phosphates, cod-liver oil, &c., according to each case. Forty children were present at my visit; most of them had more or less severe rickety deformities of the extremities, but I saw one case of severe spinal caries, and another of severe lateral curvature. Children as young as two years old are received. There is a well-arranged bath-room on the premises. I noticed several rocking-horses and three different sizes of tricycles for the use of the children. Froebel's Kindergarten educational system is followed as far as possible. Surely "exostosis" is a misprint for "deformity," when you state "that, as a rule, an exostosis would disappear at the end of one or two years."

It would be a great step in advance if such schools for rickets could be established in various districts of London. The number of candidates for admission to the "homes for incurables" would be diminished within a few years, and many human beings would be preserved from a useless life of long-suffering misery, the result of incurable deformity, by being treated before it was too late.

I am, Sir, your obedient servant,

Wimpole-street, W., Oct. 15th, 1883. BERNARD ROTH, F.R.C.S.

*** As our correspondent suggests, the word "exostosis" was, by an oversight, allowed to pass for "deformity."—ED. L.

DANGERS OF INFECTION FROM GLAZED EARTHENWARE.

ACCORDING to the *Journal du Ceramiste et du Chaufournier*, M. Peyrussen has just addressed a note on this subject to the Academy of Sciences, in which he points out the danger of using glazed earthenware in connexion with the administering of food to hospital patients. Amongst other causes of danger, reference is made to the quantity of lead contained in the glaze, no less than ·22 of a gramme of sulphate of lead having been found to exist in 100 grammes of milk which had fermented in a vessel of the kind indicated. Reference is made to the economical and entirely inoffensive process of M. Constantin, which is a varnishing with boro-silicate of lime, for the adoption of which the intervention of the Government is suggested. The results of experiments made have pointed to the fact that vessels in which broth or milk have once been allowed to ferment afterwards cause that process to ensue more rapidly, even if carefully cleaned.

GERMAN MEASLES.

To the Editor of THE LANCET.

SIR,—I venture, as a schoolmaster in charge of a large number of young boys, to bring under your notice the want of a definite English name for the common complaint known as "rubella," "rötheln," or "German measles." So far as my own knowledge and experience go, this disease is of somewhat recent origin; at any rate, it appears to have been only recently understood and described, and it is remarkable how many persons are unaware of its existence. Consequently, when it breaks out in a school, the misconceptions on the subject are numerous and inconvenient.

We had a visitation of the complaint last summer. One of the masters had contracted it, he knew not how, during his Easter holiday and shortly after his return he had a rash all over his face, and the peculiar swellings behind the ears, which form a well-known feature, I believe, in the diagnosis of the ailment. He did not consult a medical man in time, took his class as usual, and of course infected the boys. Eventually we had twenty-seven cases in successive detachments, nothing serious of course, though very tiresome.

But now comes an annoying part of such a visitation. As you and your readers are no doubt aware, people are apt to think that they know all about medical matters, and their confidence of assertion is commonly in an inverse proportion to their real knowledge and experience of contagious diseases. Moreover, the Christian virtue of minding one's own affairs is rare in a watering-place; therefore it was rumoured that my boys had measles, and people persisted in calling it by that name. Others, as we were informed, hinted that either we did not understand our business or told falsehoods, for they confidentially informed their friends that we had scarlet fever in the school.

Now, all this, which is not very important, might be avoided, and needless alarm saved to parents, which is more important, if we could have a recognised and distinctive English name for rubella, as we have for chicken-pox, whooping-cough, mumps, and so on. As long as we have to call it by the misleading and unmeaning name of "German measles," so long will it be confounded with measles, to which disease (I write under correction) it seems to be only remotely allied, and which (*experto crede*), though only recently undergone, affords no protection whatever against its attack; and so long the popular ideas on the subject will be vague and mistaken. I am, Sir, your obedient servant,

Oct. 13th, 1883. A. L. H.

*** We sympathise with our correspondent, and recommend the matter to the notice of nosologists.—ED. L.

COURTESY.

To the Editor of THE LANCET.

SIR,—Lately I have been on the look out for an assistant, and have replied to several aspirants advertising in your journal, but, to my disgust, from some of them I received no kind of acknowledgment, keeping one in unnecessary suspense. The chief attribute in a gentleman is courtesy, coupled, in a medical assistant, with good business habits, and who ought immediately to answer a letter, if only by a post-card, accepting or declining further correspondence. I have been perfectly astounded at the ignorance displayed by young medical men on this head, so different from young men engaged in commercial pursuits. Much is said about preliminary education; a little in the above line would be an acquisition. For the benefit of those interested, you will oblige by giving this insertion in an early issue.—I am, Sir, yours, &c.,

Oct. 9th, 1883. M.D.

*** While we agree with the sentiments of "M.D.," we are bound to confess that complaints equally strong have reached us from the other side.—ED. L.

THE MEDICAL PROFESSION AND LIFE ASSURANCE OFFICES.

To the Editor of THE LANCET.

SIR,—I received a list of questions from a former patient, with a stamped envelope, directed to the London office of the London Life Association, and no other word of comfort or explanation. My former experience of such papers led me to write to the Association declining to answer these very mild ten questions unless a fee of half a guinea were previously sent. Do you commend me for this action?

I am, Sir, yours truly,

Shepton Mallet, Oct. 15th, 1883. F. PORTER SMITH.

*** The fee should certainly accompany the list of questions to be answered.—ED. L.

UNITED STATES DEATH-RATES.

THE *Sanitary Engineer* publishes the following vital statistics of the United States:—

"During the week ending September 15th, in 33 cities of the United States having an aggregate population of 7,204,600, there died 3066 persons, which is equivalent to an annual death-rate of 21·8 per 1000. For the North Atlantic cities the rate was 21·8; for the eastern cities, 21·3; for the lake cities, 21·4; for the river cities, 19·3; and in the southern cities, for the whites 20·0, and for the coloured 44·1—an unusual degree of uniformity. 44·1 per cent. of all the deaths were of children under five years of age, the proportion continuing highest in the lake cities, where over half the deaths were of this class. Accidents caused 4·1 per cent.; consumption, 12·8; diarrhœal diseases, 12·7; diphtheria, 3·2; typhoid fever, 3·5; malarial fever, 2·1; scarlet fever, 1·6; pneumonia, 4·0; small-pox, 3·9; and whooping-cough, 2·9 per cent. of all deaths. No deaths from measles or scarlet fever are reported in southern cities, in which, however, the mortality from consumption is high."

S. H.—We fear we cannot assist our correspondent in the matter.

A. K.—We cannot insert the letter.

"INTERMITTENT CHYLURIA."

To the Editor of THE LANCET.

SIR,—I have just seen a request in your issue of August 25th by Mr. R. Parnell Griffiths, M.R.C.S., concerning the treatment of a case of intermittent chyluria. According to the latest studies of Manson, we are justified in supposing chyluria to be developed from the obstruction produced in the lymphatics by a swarm of immature embryo filariæ. In other words, the maternal parasite occasionally aborts, and the abortive products have too great dimensions and are of too unwieldy a shape to pass through the fine lymph-vessels into the circulation, as do the fully developed thread-like parasites. As soon as these obstructions are overcome, the patient in question is freed from the chylous urine, but so long as the original parasites infest him, so long is he subject to a recurrence which may at no distant date become permanent. If, therefore, the source can be removed, this recurrence will be abolished, so that the question of treatment is confined to what will destroy the parasites *in situ*. Without entering into the *rationale* or discussing the *modus operandi*, I have only to suggest that in my hands in the West Indies the salicylate of iron proved successful in those cases which occurred in my practice. I append the formula, which might otherwise not be easily obtained:—Sulphate of iron, six drachms, twenty-four grains; salicylate of soda, one ounce; acetate of soda, five drachms, twenty grains; water one pint. Each fluid ounce of the above is equal to thirty grains of salicylate of iron. Dose, one to two drachms. It may be combined in any mixture with acetate of potash, spirit of nitrous ether, digitalis, &c. It may be used in erysipelas combined with a diaphoretic instead of tincture of chloride of iron. In this disease use half-ounce doses. Salicylate of iron is thoroughly incompatible with ammonia and its preparations. In this preparation the patient not only has the germicide effect of the salicylic acid, but the tonic action of the iron, which is always indicated, and that in a form easily assimilated, and which may be made easy and pleasant to take.—I am, Sir, yours, &c.,

Winnipeg, Manitoba, Sept. 17th, 1883. J. H. ARTON, M.D.

RÖTHELN OR RUBEOLA.

To the Editor of THE LANCET.

SIR,—From October, 1879, to March, 1880, I had to deal with an outbreak of rötheln. Measles and scarlatina coexisting at the time gave me an opportunity of contrasting and comparing the diseases and their symptoms. The following summary of the characteristics and symptoms of rötheln, taken from a paper I read at the Cork Medical Society in May, 1880, may not be uninteresting at the present moment:—

"An incubative stage of a fortnight, the disease beginning with pains in the limbs, headache, and stiffness in the neck; the short pyrexial period, the rash appearing in most instances in twenty-four hours, beginning on the face and spreading downwards over the entire body, first appearing as a papular eruption like strophulus, then assuming a measly character, and finally, the spots coalescing, produced an appearance resembling scarlatina. It generally took about three days before the body was entirely covered with the rash, during which time the fever was at its height. The rash then faded as it began, from above downwards, and with it all feverish symptoms. The pulse ranged from 100 to 105; the temperature sometimes reached 102°; and in every instance there were headache and vomiting, sore-throat without any ulceration, cervical glandular enlargement, with occasional tenderness. There were no thoracic complications, no catarrh or coryza, and no sequelæ." In many instances there was conjunctival injection, photophobia, and a most unpleasant itchiness over the entire body, with profuse perspirations. The great majority of the cases were children.

I am, Sir, yours truly,

Cork, 1883. D. D. DONOVAN.

THE DURATION OF WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—Can you or some of your readers give any definite directions as to the duration of the infection of whooping-cough? The long continuance of the cough in cold weather makes it difficult to say when it is safe for the patient to mix with others, to return to school, &c.

I am, Sir, yours, &c.,

Oct. 9th, 1883. J. B. J.

"OUR DOCTOR."

WE have received a copy of the *Sunderland Weekly Echo*, in which appears an article under the above heading, written, we regret to observe, by one who has either gone through a professional training, or else has in some way or other obtained access to the bookcase of a medical neighbour, and also, if we may judge by the two or three hackneyed quotations from a dead language which appear in the effusion, to a Latin grammar. It is intended to publish articles from week to week, but we trust that the writer, if a legally qualified medical man, will reconsider his determination.

THE letter of the *Rev. H. E. Trotter* arrived too late for insertion this week.

ENTERIC FEVER AND OTORRHŒA.

To the Editor of THE LANCET.

SIR,—In connexion with Mr. Coveney's inquiry in your last issue, the following notes of a case that occurred in my practice may be worthy of insertion.

On the first day of illness a bad shiver, earache, and general malaise, with pain in joints until the fifth day were reported. On that day a blister was ordered behind the ear on account of excessive pain. On the seventh day, the earache being much better, sudden delirium supervened at 3 P.M.; temperature, 103·6°. At 11 o'clock the same evening a neighbouring practitioner thought the case might be typhoid. On the eighth day a London consultant gave a guarded opinion, inclining to the idea that it might be ear trouble, recommending careful watching, and an aurist's opinion if the patient became worse, with a possible view of opening mastoid cells. On the tenth day the patient was carefully examined early in the morning, and bathed by nurse; no spots seen. At 3.30 the same day, at the wish of friends, an aurist examined the patient, and detected nothing the matter with the ear; but on examining the abdomen a large quantity of typhoid spots was found. There was a good deal of delirium, but the temperature, except on the seventh day, as above noted, rarely exceeded 102° at night. I should mention that until the sudden invasion on the seventh day the motions were not at all suggestive of typhoid, though carefully examined. The history obtained pointed to frequent ear trouble from infancy, although a case of typhoid had occurred within a short distance where the patient had been staying. There was no discharge from the ear on this occasion, though there had been previous attacks of otorrhœa. I have heard of typhoid following otorrhœa, but do not speak from personal experience. I classified the above case with typhoid, commencing with meningitis (*vide* Quain's Dictionary of Medicine).—I am, Sir, your obedient servant,

Oct. 10th, 1883. W. P.

THE BOAST FUND.

To the Editor of THE LANCET.

SIR,—I have received the following additional subscriptions to the above fund. I shall feel obliged by your inserting them in your next issue.

Mr. T. L. Lack	..	..	£10	0	0	Mr. R. Heald	..	.. £2 0 0
Mr. J. Taylor	..	..	2	2	0	A. B. Z.	..	.. 0 10 6
Mr. H. Stear	..	..	2	2	0			

I remain, Sir, yours sincerely,

18, George's-terrace, Plymouth, Oct. 15th, 1883. GEO. JACKSON.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Gamgee, Manchester; Dr. Burdon-Sanderson, London; Mr. Pugin Thornton, London; Mr. Andrew Clark, London; Mr. G. C. Parvis; Dr. G. Lade, Glasgow; Mr. Allen Jones, Chester; Surgeon-Major Y. Hunter, London; Mr. Harper, Holyhead; Dr. Strahan, Northampton; Dr. Mackenzie, Burnley; Mr. John Laird, Sligo; Dr. Cane, Belvidere; Dr. S. Sloan, Glasgow; Mr. Cooney, Fulham; Messrs. Hildesheimer and Faulkner; Dr. Ward Cousins, Southsea; Mr. Stretton, London; Dr. F. P. Smith, Shepton Mallet; Mr. A. R. Manby, East Rudham; Mr. R. C. Lucas, London; Mr. Bellamy, London; Mr. H. W. Roberts; Mr. Schofield, London; Mr. B. Roth, London; Messrs. Merryweather; Dr. O. Sturges, London; Mr. Edmund Metcalfe; Mr. Wigglesworth, Liverpool; Mr. Richmond Leigh, Liverpool; Mr. Willey, Sheffield; Mr. F. J. Paul, Liverpool; Dr. Douglas-Lithgow, London; Dr. Collins, Nottingham; Brigade-Surgeon Don; Mr. Stephenson; Mr. C. Roberts, London; Dr. C. S. Taylor, London; Dr. Gabbett, London; Dr. Oxley, Liverpool; Mr. Blackett, London; Dr. Althaus, London; Dr. Temple, London; Dr. Markham Skerrett, Bristol; Mr. H. E. Clark, Glasgow; Dr. Wadham, London; Mr. Rendle, London; Dr. De H. Hall, London; Mr. G. P. Field, London; Mr. Scott, London; Mr. Palmer, Bristol; Dr. G. Elder, Nottingham; Mr. Freeman, Bath; Rev. H. E. Trotter; Mr. J. H. Johnson; Mr. Forrest, Brandesburton; Messrs. Dawson Brothers, Montreal; Mr. Thompson, Pau; Messrs. Macmillan and Co., Cambridge; Dr. E. Andrew, Shrewsbury; Mr. J. Lewis; Mr. Bogue; Messrs. Baines and Sons, Leeds; Mr. Tallack; Mr. Webb, Blakney; Dr. Oliver, Harrogate; Mr. Kershaw, London; Dr. Ward, Leipsic; Dr. F. Taylor; Messrs. Lee and Martin, Birmingham; Dr. Austin, Tongue; Messrs. Loeflund and Co.; Mr. Macpherson; Dr. Bramwell, Edinburgh; Dr. Macadam, Edinburgh; Dr. Hill, Buxton; Dr. Praen, Bedford; Mr. Pentland, Edinburgh; Messrs. Davis and Co., London; Dr. Denton, Steeple Claydon; Mr. Cooper, Derby; Messrs. Burgoyne and Co., London; Mr. Baillière, Paris; Mr. Hodgkins, Leicester; Mr. Craske; Mr. Scott; Mr. Briggs, Bombay; Mr. E. Nicholson, London; Dr. Pownall, Chorlton; Dr. Paton, Greenock; Dr. Tomkins, Manchester; Mr. Hendley, London; Dr. Milward; Mr. G. Jackson; Dr. Tindal, Glasgow; Dr. Mackie, Alexandria; Mr. Tinley, Whitby Surgeon D. C. Davidson, Bombay; Mr. Knox, London; Mr. Sydney Jones, London; S. R., Calcutta; C. M.; W. M.; In Ardua Tendit; D. C. M.; Omega, Peterborough; Orchard; B. D. F.; L.R.C.P., London; R. B. M., Kingston; J. M. C., Halifax; S. M.; Dens; Tyro; M.D., M.R.C.P.; A. L. H.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cooke, Leeds; Dr. Wyley, Skipton; Dr. Keeling, Sheffield; Mr. Williams, Oxford; Mrs. Lay, Northampton; Mr. Lake, Gravesend; Mr. Lefroy, Clifton; Mr. Darill; Mr. Fraser, Bridgwater; Mr. Hinds, Halstead; Dr. Johnstone, Sheffield; Mr. Shaw, Bacup; Dr. Herne, Darlington; Mr. Forbes, Drumlithie; Mr. Wylie, Belfast; Mr. Ballard, Smarden; Mr. Backley, Weston-super-Mare; Mr. Smales, York; Mr. Walker, Liverpool; Mr. Clark, Street; Mr. Claxton, Boscombe; Mr. Hatton, Ayr; Mr. Carty, London; Mr. Yeatman, Manacoote; Mr. Lambard, Bradford; Messrs. Champneys and Co., London; Mr. Order, Cardiff; Mr. Wilmer, Walsall; Mr. Campbell, Halifax; Mr. Smith, Halifax; Dr. Greenwood, Camberwell; Mr. Hopkins, Camberwell; Mr. Morgan, Mildmay-park; Mr. Keele; Messrs. Giles and Co., Clifton; M. E. Z.; Medicus, Dublin; J. S., Earl's-court; X. Y. Z., Manchester; Medicus, Belfast; P. P., Hansworth; O. K.; Theta, Notting-hill; Surgeon; E. S., Pimlico; Lady Superintendent, Cambridge; Medicus, York; A. J., Mole; B., Tavistock; W. A. G., Leicester; M. S.; Veritas, Guy's Hospital; Beta, London; D. E. C.; M. C., Bradford; J. L.; Medicus, Manchester; A. B. C.; H. S., Stow-on-the-Wold; M.D. Lond.; M. H.; R. M. P.; X. Y. Z., Finsbury; G. H. S.; J.; Medical; M.P.; General Practitioner; M.A., Sheffield; M.D., London; Delta; H. R., Bradford; Achates; M.D., Bromley; M.D., Newport; S. C. O.; &c., &c.

Sussex Daily News, Merthyr Express, Le Bosphore Egyptien, Liverpool Mercury, Staffordshire Sentinel, Sunderland Weekly Echo, Moniteur Egyptien, Times of India, Carlisle Patriot, &c., have been received.

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An entire Page	5	5	0

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 68, Rue Caumartin, Paris.